august 1957

office management

the magazine for management executives

AUG 1 8 1957

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New centralized office serves decentralized functions (See page 28)

in this issue

- Every company can afford an executive development plan
- How a small office can design its own forms efficiently
- How to select the best machines for your office's needs

Another reason why the IBM is your best electric typewriter buy:

IBM gives you the most dependable performance

with its typewriter

with its service!

Because the IBM is the world's *simplest* electric in design and operation, it is the most dependable in performance. That's why, with the IBM, loss of valuable office time because of breakdown is kept to a minimum. In addition, the IBM helps turn out more and better typing in less time to help boost office efficiency.

Like anything mechanical, though, your IBM Electric will perform best when it receives expert care and servicing. And that's when you'll be doubly glad you chose IBM—because IBM's *factory-trained* Customer Engineers are noted for their prompt, efficient, courteous service. Also, IBM's dependable periodic inspection program helps keep maintenance costs to a minimum.

Remember, when you go IBM you get the finest and favorite electric typewriter—and the fastest, most efficient service!

IBM® ELECTRIC TYPEWRITERS —OUTSELL ALL OTHER ELECTRICS COMBINED!

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1 "Say . . . what are all these out-of-state orders? Our men don't cover those territories regularly, do they?"

2 "It's the result of the *call-collect* idea that the boss worked out recently with the telephone company."

3 "Think I've heard of that. We invite customers to call us collect on orders, deliveries, complaints, and so on."

4 "Right! They like it. And we like it, too. Builds a lot of good will, and it certainly pays off for us!"

Call-collect idea brings in more out-of-town orders

The *call-collect* idea is just one of the ways businessmen can use the telephone profitably. A telephone representative will be glad to discuss specific ideas for your business. Just call your Bell Telephone Company business office.

LONG DISTANCE RATES ARE LOW

Daytime Station-to-Station Calls

For example:	First 3 Minutes	Each Added Minute
Boston to New York	75¢	20¢
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Milwaukee to Detroit	90¢	25¢
Pittsburgh to Chicago	$1.15	30¢
Los Angeles to El Paso, Tex.	$1.50	40¢

Add 10% Federal Excise Tax

BELL TELEPHONE SYSTEM

Call by Number. It's Twice as Fast.

the
EXPERIENCED HAND
of
Macey-Fowler

For years, Macey-Fowler has been creating and furnishing offices for leading corporations, large and small. Whether you need one steel filing cabinet, a complete board room, executive or general office groupings, call Macey-Fowler 305 East 63rd Street, New York 21, TEmpleton 8-5900

AUGUST 1957

Volume XVIII No. 8

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office management

Office Methods, Equipment, Personnel, and Purchasing
Sponsor of the "Office of the Year" Awards

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Today every company can afford an executive development plan 21
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by Robley D. Stevens

Tools of the office series
This month: Adding, calculating, bookkeeping and accounting machines, systems and devices; machine work station equipment 47
by Robert Beeman

AS up-to-the minute as the furnishings and layout of the new executive office building of Cory Corporation is the motivation which prompted its construction: Decentralization. Akin to many of today's companies, Cory is experiencing a rapid growth; and its new building is designed to house the executive staffs which will direct the manifold operations of an expanding organization. See story page 28.

Subscription: $4 a year in United States and in possessions, Canada, Mexico, Cuba, Central and South America. Other countries $9 a year. Single copies 45c; Yearbook Issue $1. Copyright 1957 by Andrew Geyer-McAllister, Inc.; all rights reserved. Also publisher of Geyer's Dealer Topics, Who Makes It and Where, and The Gift and Art Buyer. Please give 60 days' notification of any change of your address. Re-entered as second class matter June 29, 1953, at the Post Office at New York, N. Y., under Act of March 3, 1879.

Employers wary of older workers, OEA reports

By the time a man has reached the age of 55, or a woman the age of 50, chances for employment are dimmed almost to the point of no return, a recent survey undertaken by the Office Executives Association of New York, Inc., has disclosed.

Results of the survey were based on replies from 121 different companies. In all, a total of 10 questions, ranging from Maximum Hiring Ages to Benefits and Hiring, was included in the survey.

A summary of the more significant results shows—

Maximum Hiring Age: After a man has reached his fiftieth birthday, about 42 per cent of the responding companies are barred to him. Yet, almost 57 per cent of the respondents indicated he had not yet passed the upper limit of the age range of greatest productivity. At 55, finding new employment is practically impossible, since he has passed the maximum hiring age of 65 per cent of the companies. By the time a woman has reached 45, almost one in every four companies consider her "too old" to hire. At 50, a woman has passed the maximum hiring age for about 56 per cent of the companies.

Age Range of Productivity: Almost 63 per cent indicated that a man *begins* to be highly productive between the ages of 30 and 45. Although not clearly defined, his top range appeared to fall between the ages of 40 and 55. More than 93 per cent agreed that by the time a woman is 30, she is beginning to rise through the "lower limits" of the productive range. As with male workers, her top range was not clearly defined, but appeared to lie somewhere between 40 and 50.

Age and Jobs: In most cases, the survey shows, jobs offered to older persons are menial, in low salary ranges and require little or no skill. Using the maximum hiring rate effective during the first two months of 1957 as a basis, men hired for the three jobs most often mentioned—general clerical, messenger and mail room—might expect salaries ranging between $47 and $50 a week. A slightly higher average for women—$50 to $73 a week—existed, since their background in typing and shorthand would aid in placing them as general clerks, typists and/or stenographers.

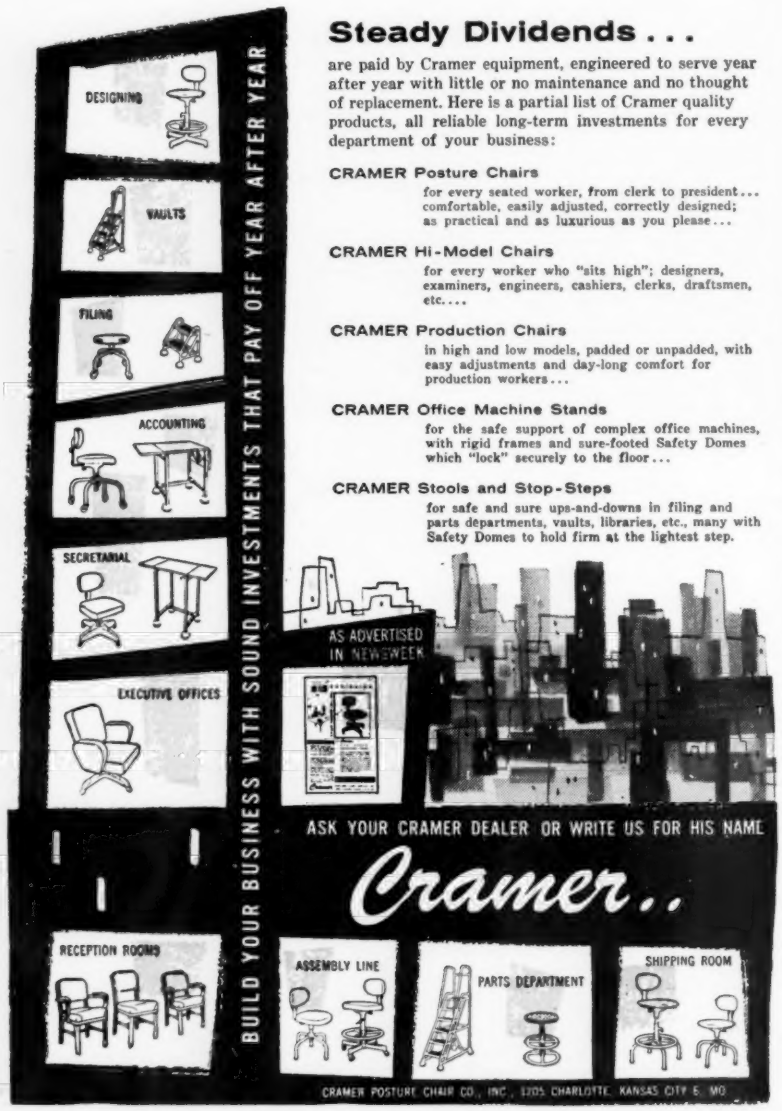
Turnover, Absenteeism and Age: In a series of questions, an overwhelming majority (99 per cent) could not cite absenteeism or turnover as legitimate excuses for not hiring older workers. Only one respondent in 118 indicated that the absenteeism and turnover records of the older worker are worse than those of the younger person. One criticism, however, suggested that illness in older workers often is more severe and of longer duration than that of their younger counterparts.

Young People vs. Older Workers: The majority agreed that mixing of older and younger employees has little or no adverse effect on the morale of the younger workers. Such a procedure, in some cases, was recommended as a means to stabilize the younger employees. The major drawback seemed to be that the older worker tends to be more difficult to train for a specific job.

Benefits and Hiring: More than two in every three respondents indicated that hiring older persons does not increase business costs through increased benefit costs.

It is evident from the results, the survey concludes, that "many businesses are failing to make adequate use of the reservoir of talent available through the hiring of older workers.

"In view of the critical clerical shortage and the repudiation of the common reasons against hiring older people, the survey shows that the additional 10 to 15 years of working age before retirement of many unemploy-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are paid by Cramer equipment, engineered to serve year after year with little or no maintenance and no thought of replacement. Here is a partial list of Cramer quality products, all reliable long-term investments for every department of your business:
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for every seated worker, from clerk to president... comfortable, easily adjusted, correctly designed; as practical and as luxurious as you please...
CRAMER Hi-Model Chairs
for every worker who "sits high"; designers, examiners, engineers, cashiers, clerks, draftsmen, etc....
CRAMER Production Chairs
in high and low models, padded or unpadded, with easy adjustments and day-long comfort for production workers...
CRAMER Office Machine Stands
for the safe support of complex office machines, with rigid frames and sure-footed Safety Domes which "lock" securely to the floor...
CRAMER Stools and Stop-Steps
for safe and sure ups-and-downs in filing and parts departments, vaults, libraries, etc., many with Safety Domes to hold firm at the lightest step.
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EXECUTIVE OFFICES
RECEPTION ROOMS
BUILD YOUR BUSINESS WITH SOUND INVESTMENTS THAT PAY OFF YEAR AFTER YEAR
AS ADVERTISED IN NEWSWEEK
ASSEMBLY LINE
PARTS DEPARTMENT
SHIPPING ROOM
ASK YOUR CRAMER DEALER OR WRITE US FOR HIS NAME
Cramer..
CRAMER POSTURE CHAIR CO., INC., 1205 CHARLOTTE, KANSAS CITY 6, MO.

"Yesterday this shop racked up a $423 loss!"

The foreman's bewildered. How can the plant manager be so sure? Even in a small shop like this one, you don't get *that* kind of information in 24 hours!

The plant manager never thought so, either. Today he knows different. He's got yesterday's down-time figures right in front of him. There's a loss all right. But he knows where – and why. And most important, he knows now that he's equipped to prevent its happening again.

Good thing management discovered the Keysort Plant Control Plan! With just five fast, accurate PCP reports – 1 daily, 2 weekly, 2 monthly—they now have complete management control... can prevent money-losing situations *right in the office.*

PCP not only helps management plan in advance, it helps *you* as well. With a minimum clerical burden, you achieve greater reporting accuracy – flexibly, easily. Your office people simply punch pertinent daily information into the Keysort cards... Keysort them ... and summarize *direct* to reports. There's no transcribing ... no costly, time-consuming intermediate steps. Management gets needed information *on time.* And at remarkably low cost.

The nearby McBee man has a presentation which will show you how it's done. Phone him, or write us for illustrated folder containing examples of all five reports.

McBEE KEYSORT®

Punched-card accounting for any business

Manufactured exclusively by **The McBee Company, Athens, Ohio** • Division of Royal McBee Corporation
Offices in principal cities • In Canada: The McBee Company, Ltd., 179 Bartley Drive, Toronto 16, Ontario

For More Information From Advertisers Use Readers' Inquiry Coupon on Last Page

thanks to XEROGRAPHY...

60 copies of a 50-page report in only 3 hours . . . each copy as sharp as the original

Sally Jo is a happy girl today. She's getting compliments from everyone. That new hair-do does something for her. So does that snappy outfit . . . And xerography makes her look good, too.

What's xerography?

That would have been a fair question a few years ago when The Haloid Company first unveiled it. But today xerography is widely known—in business, industry, and government—as the world's most versatile and economical copying process.

If you've installed it at your plant, you know that paperwork duplicating of all kinds is no longer a problem.

That's why Sally Jo looked good today. The vice-president asked her if she could get him 60 copies of a 50-page report *in less than three hours.*

Impossible? Not with versatile xerography. She quickly had the necessary 50 offset paper masters prepared on XeroX® copying equipment, then had multiple copies run off on an offset duplicator.

"Splendid!" exulted the v.p. "These copies look as crisp and fresh as yourself. They're terrific, Sally Jo . . . thanks to xerography. When I go into a meeting or send out a report, I want everyone else to have just as good a copy as my own. That's what these are . . . each as sharp as the original."

The fastest, cheapest, most versatile way to make masters for duplicating

Anything written, printed, typed or drawn can be quickly copied by xerography onto masters for duplicating. Copies in the same, enlarged, or reduced size can be made from one or both sides of the original material, by this dry, photo-exact, electrostatic copying process. New developments make xerography the one, all-purpose, fast and economical process for copying onto different types of masters for duplicating.

WRITE for proof-of-performance folders showing how xerography is saving time and thousands of dollars for companies of all kinds, large and small.

THE HALOID COMPANY
57-86X Haloid St., Rochester 3, New York
Branch offices in principal U. S. cities and Toronto

HALOID XEROX®

ed people is a source of talent being wasted. It is most significant that the replies to this questionnaire indicate a relatively inconsistent 'pattern' for maximum hiring age and productivity, while showing a definite pattern repudiating the 'logical' reasons for the establishment of a maximum hiring age."

In Short—

Growth of office equipment industry linked to creation of new markets

Office machine manufacturers, in spite of signs of a levelling-off in the nation's business activity, continue to book new orders at an accelerated pace, the *Value Line Investment Survey* has reported. No longer dependent entirely on mere growth of the business population and the replacement market, the office equipment industry, the Survey continues, "through diligent research . . . has developed new, revolutionary products and has thus created new markets." The office equipment business has changed into a growth industry from a highly cyclical one, the report adds, and the upward trend of manufacturers' shipments is likely to persist.

NCR announces development of a new magnetic core

Development by research physicists at The National Cash Register Co. of a new type of magnetic core for transistorized electronic computers has been announced by the Dayton, Ohio business machine manufacturing firm. Development of the N400-080 ferrite core—the result of three years' research—is expected to offer the greatest stability yet achieved for a transistor-operated core over a wide range of temperatures, currents and other disturbing influences, the company reports. In addition to using the new cores in its own electronic computers and similar circuits, NCR will make them available to other manufacturers.

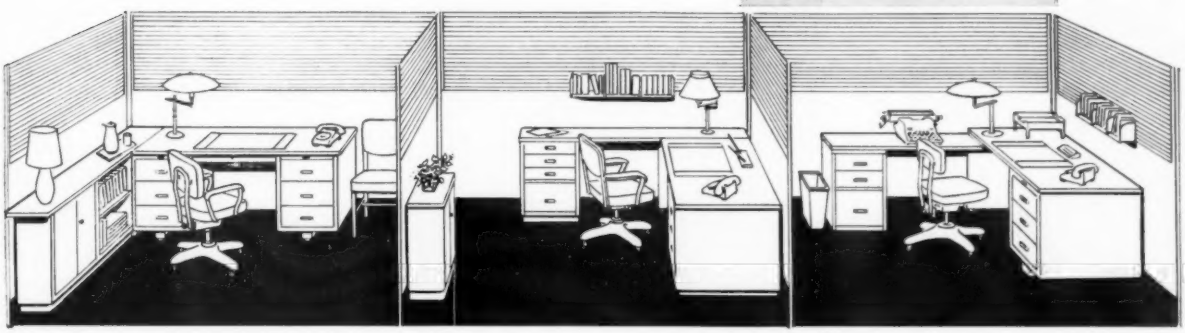
New York systems consultant elected new SPA president

F. Walton Wanner, a certified public accountant and a systems consultant with the Standard Oil Co. (N. J.), New York, has replaced Allan Y. Davis as president of the Systems & Procedures Association of America for the year 1957-58. Joseph A. MacQueen of Allan Wood Steel Co., Consho-

HERE'S A "PLUS"

that is yours at a saving

— an employee who is happy — because she is working efficiently, without the interruptions of passers-by and overheard conversations. Multiply that and you have a "plus" that is vital to you.

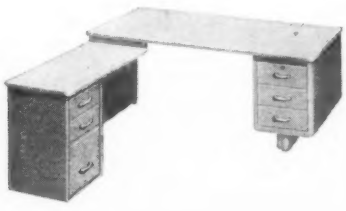


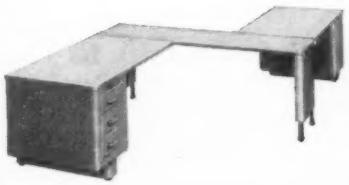
Versa-Line STEEL OFFICE EQUIPMENT

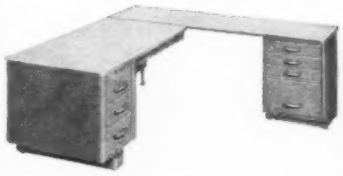
These fine, movable pieces enable you to provide better, more efficient, work areas — at an actual saving in floor space. You have increased efficiency throughout the office — this cost item becomes increasingly important each day.

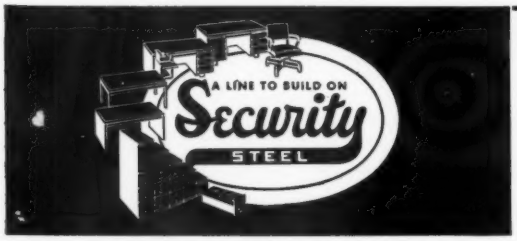
Versa-Line comes in a wide variety of individual units, so that you can arrange just the desk space, table room and filing capacity that is indicated in each particular situation. The colors and finishes harmonize with the smartest office decor. Versa-Line gives you new office efficiency at low cost.

Would you like the facts and complete details? We'll gladly send you our new illustrated catalogue and Office Plan Rule — so you can plan better offices, and prove to yourself the dollar-and-cents value of the new Versa-Line Steel Office Equipment. Just mail the coupon below.









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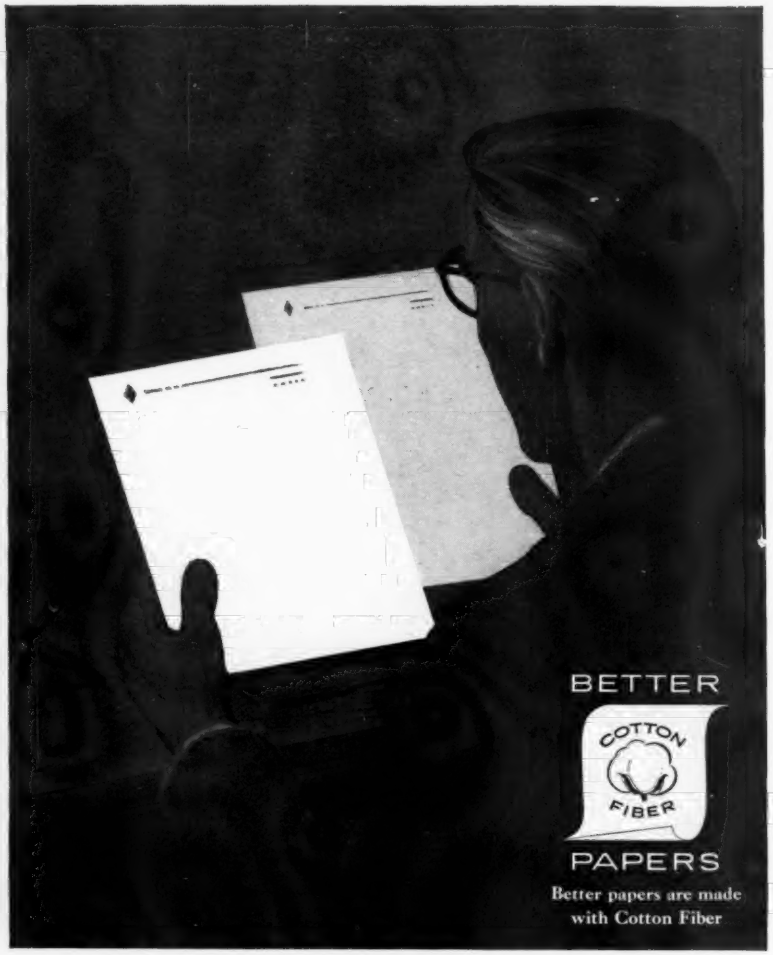

GIVE YOUR LETTERHEAD A LIFT WITH WESTON COTTON FIBER BOND

You can see the difference, feel the difference . . . even *hear* the difference when you compare WESTON BOND with letterhead papers that lack cotton fiber quality. Cotton fiber adds character and impressiveness that *stand out* at a cost you hardly notice.

See for yourself the difference cotton fiber quality can make in your letterhead and business forms. Ask your printer to use WESTON BOND for your next lot of letterheads. He has it in white, colors, white opaque, white litho finish and matching envelopes . . .

Or write for a sample book and make your own comparison. Address Dept. OM.

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Makers of Papers for Business Records Since 1863
DALTON, MASSACHUSETTS

WESTON BOND
Cotton Fiber Quality Letterhead Paper

hocken, Pa., was elected vice president. Other new officers include David D. Merrimen, McCord Corp., Detroit, secretary, and Russell Holland of Procter and Gamble Co., Cincinnati, treasurer. The association also reports that local headquarters has been established at 629 S. Hill St., Los Angeles, in anticipation of the International Systems Meeting, scheduled for that city in the fall, and "because of the increased demand by industry and business for information about systems, procedures and office automation."

Detroit accountant is installed as new NACA president

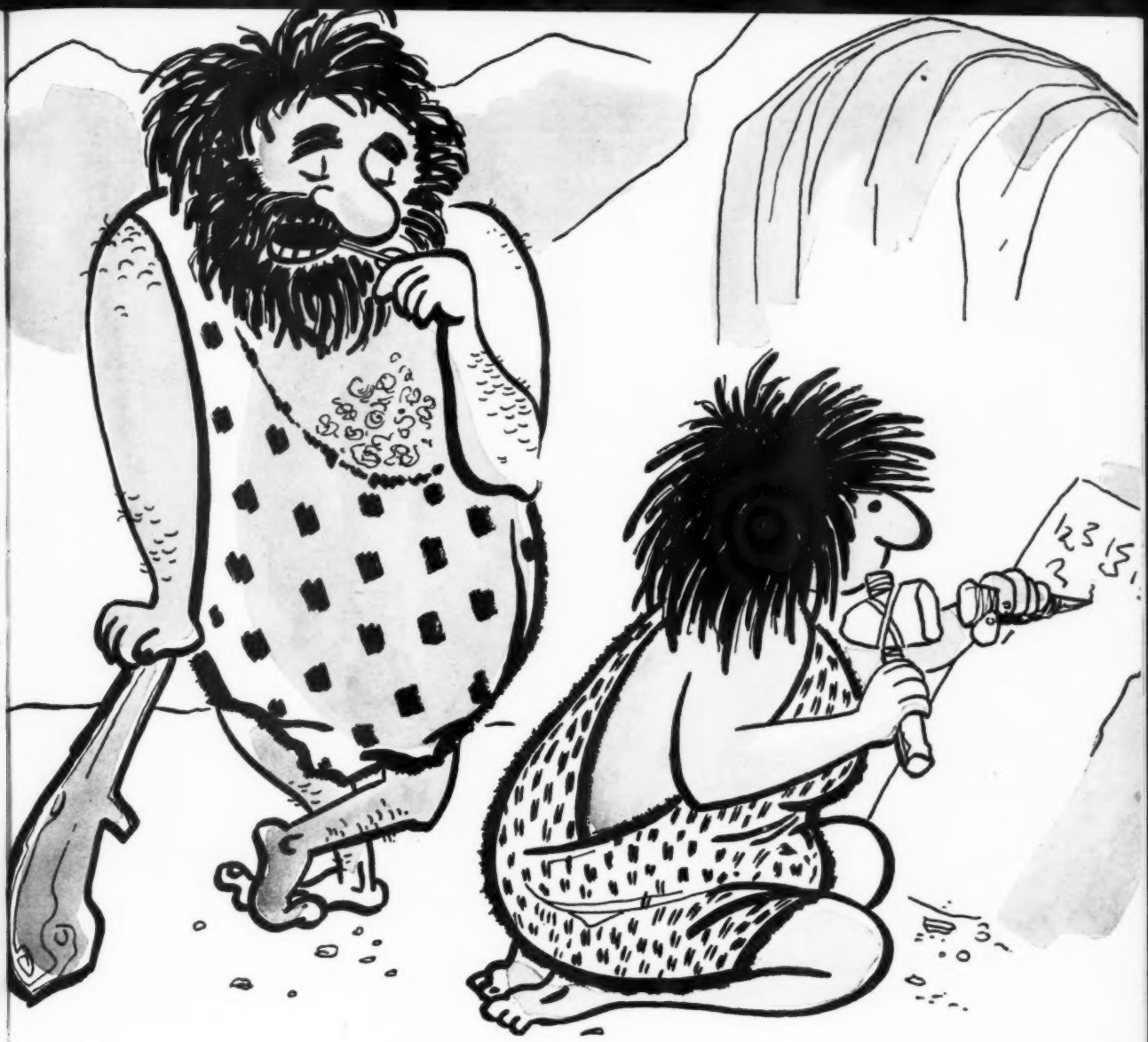
Harold W. Scott was inducted into office as president of the National Association of Cost Accountants at special ceremonies during the association's annual dinner, held recently at the Sheraton-Park Hotel in Washington, D. C. Mr. Scott is a partner in the public accounting firm of Haskins & Sells, Detroit.

New studies to be offered by NYU's Management Institute

A new program in electronic data processing, a workshop seminar on paperwork management, a new laboratory course in wiring and operating punched card equipment, and "Psychological Testing in Industry," a practical course for personnel directors, are among new studies added to the fall curriculum of The Management Institute of New York University's Division of General Education. The fall session will open in late September, and further details concerning courses, their instructors and meeting hours may be obtained from Dr. Denis Sinclair Philipps, the Institute's director, at New York University, Washington Square, New York 3, N. Y.

Honeywell purchases Raytheon's share in Datamatic Corp.

Disclosure of the purchase by Minneapolis-Honeywell Regulator Co. of the 40 per cent interest of Raytheon Mfg. Co. in Datamatic Corp., was made recently. Purchase price was $4,500,000, and as result of the transaction all outstanding shares of Datamatic are now owned by Honeywell. Datamatic was organized jointly by Honeywell and Raytheon in 1955 to engage in development of large-capacity, high-speed electronic digital data-processing systems. The first Datamatic system is scheduled for



"This refers to yours of the 10th..."

Some people still hammer out communications one character at a time.

Others use DATAFAX—the fast Stewart-Warner electronic way to transmit all data over standard telephone lines.

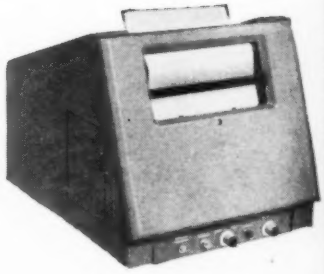
Datafax transmits and records any material: correspondence, drawings, pictures, printed matter, even handwritten notes. And since copies are exact duplicate images of the original, chance for error is eliminated.

Cost?

Automatic transmission and recording eliminate need for full-time operator; recorders will even respond to transmissions sent after the office is closed for the day. Datafax also eliminates retyping, proofreading, intermediate handling, intransit delays—and their clerical costs. The clear, smudge-proof, permanent Datafax copy costs less than 2¢ for a letter-sized unit, plus pro rata line charge.

Chances are your accounting...inventory control...engineering...production...branch sales...and warehouse operations have outgrown Stone Age Communications. If so, you'll want to find out about Datafax.

First, send for your copy of the free Datafax bulletin. Write: Stewart-Warner Electronics, Dept 42, 1300 No. Kostner Ave., Chicago 51, Illinois.



STEWART SW WARNER **ELECTRONICS**

a Division of Stewart-Warner Corporation

for any office

large or small...

Hauserman DIVIDER-WALL

pays off beautifully

New HAUSERMAN Divider-Wall creates attractive, individual work units that can bring efficient order to sprawling general-office areas. Easy to erect or rearrange quickly, Divider-Wall defines department areas, establishes traffic lanes and screens employees from annoying distractions.

With Divider-Wall standard colors—green, gray and tan, in addition to coral for gates—two dozen striking combinations of gate, panel and post colors are possible. And it's permanent color, too. The HAUSERMAN baked-enamel finish never needs repainting . . . just periodic washing.

To see Divider-Wall first hand, consult the Yellow Pages and call your nearest HAUSERMAN representative. He will gladly arrange for you to visit a nearby Divider-Wall installation.

MOVABLE HAUSERMAN INTERIORS

National Lifetime Service . . . an Exclusive Hauserman Dividend

THE E. F. HAUSERMAN COMPANY
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completition in time for installation during the late summer of 1957, with seven additional systems scheduled to follow in 1958.

Electronics division is established by Recordak

A new product planning department to investigate and define new or improved applications of microfilming in all types of business systems, including electronics and automation, has been established by the Recordak Corp., subsidiary of Eastman Kodak Co. James J. MacIsaac has joined the management staff of Recordak and will head the new department.

Ozalid to market microfilm, microfilm equipment

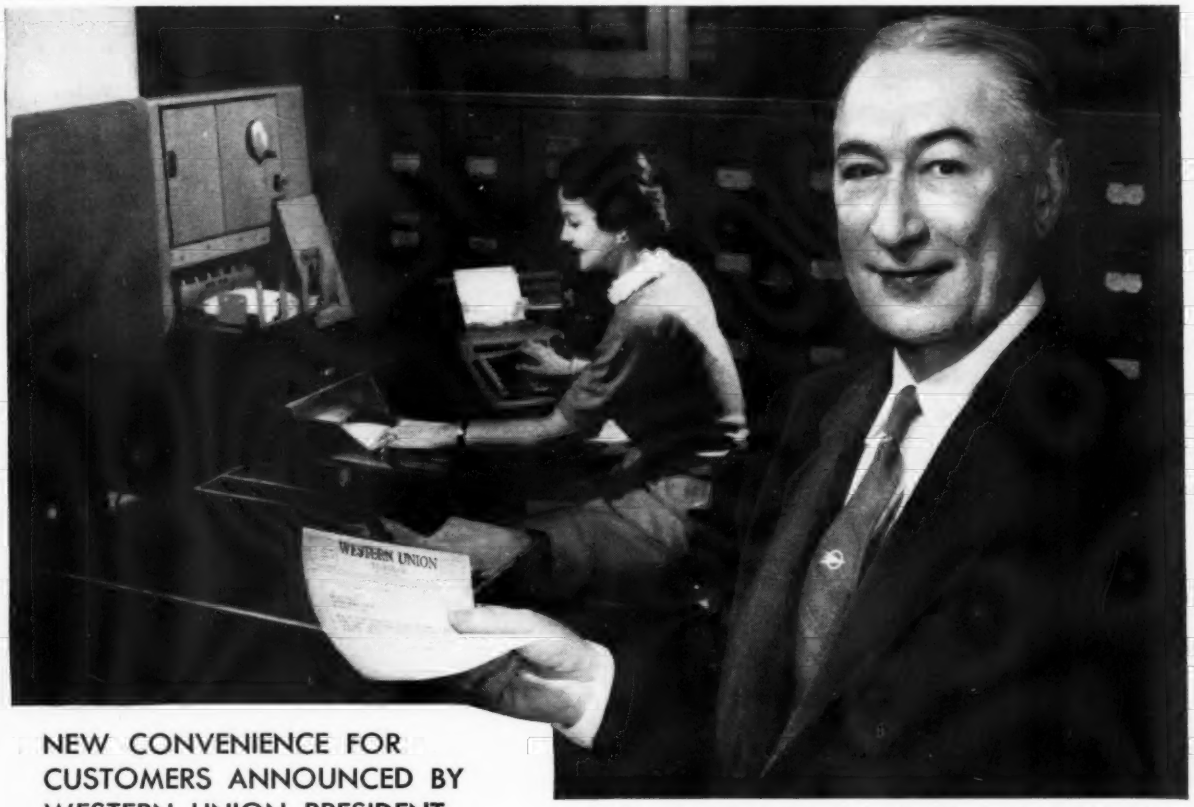
A complete line of microfilm and microfilm equipment, marketed under the name "Microline," was introduced recently by the Ozalid Div. of General Aniline & Film Corp. The line includes cameras, processors, readers, enlargers and related accessories, as well as roll and sheet diazo-type microfilm. As a supplement to the line, Ozalid will distribute aperture cards, jackets, mounting equipment and viewers manufactured by the Filmsort Div. of Dexter Folder Co. Sales and service are expected to be available on a nationwide basis, with a special department being set up at Ozalid headquarters in Johnson City, N. Y. In other developments, the division has announced plans for construction of two new plants. One, under construction on the outskirts of Los Angeles, will cost an estimated $1,000,000 and will be used for the manufacture of sensitized materials for the division. The second, at Vestal, N. Y., will be used to manufacture Ozalid white print machines and other equipment.

Globe-Wernicke purchases Aluminum Seating Corp.

Announcement of the purchase of the Aluminum Seating Corp., Akron, Ohio, by The Globe-Wernicke Co., Cincinnati manufacturer of office equipment and supplies, has been made by R. Herman Hammer, president of the Cincinnati firm. Aluminum has manufactured a line of aluminum office chairs for the past ten years, and the purchase, according to Mr. Hammer, culminates a long-time desire on the part of Globe-Wernicke to manufacture its own complete line

Short cuts with Recordak Microfilming

Latest report on how this low-cost photographic process is simplifying routines for more than 100 different types of business . . . thousands of concerns



Mr. W. P. Marshall, President, The Western Union Telegraph Co.

NEW CONVENIENCE FOR CUSTOMERS ANNOUNCED BY WESTERN UNION PRESIDENT

New York, N.Y.

Mr. W. P. Marshall, President of the Western Union Telegraph Company, revealed that the company is now using Recordak Microfilmers to photograph its customers' telegrams in 56 major cities.

This move lets Western Union return the original telegrams with its monthly bills — a great convenience for customers. It frees them from keeping a bulky verification file of all messages sent. Charges can be checked immediately. Questions about bills are reduced better than 80%.

At the same time, Western Union gets out its bills in half the time formerly spent.

Since the original telegrams go out to the customer, there's no need for the billing clerk to post the date and destination of each wire on the bill. She simply lists the charge with one hand, and with the other feeds the telegram into a Recordak Reliant Microfilmer.

This simple operation gives Western Union accounting centers photographically accurate records—in alphabetical and chronological order—which are filed in 2% of the space required before. Films can be checked in a Recordak Film Reader whenever needed—hours of searching saved.

Regardless of your type of business or its size, you should read "Short Cuts that Save Millions." Shows how Recordak Microfilming cuts costs not only in billing but also in your other daily routines.

"Recordak" is a trademark

RECORDAK

(Subsidiary of Eastman Kodak Company)

originator of modern microfilming—
now in its 30th year

MAIL COUPON TODAY

RECORDAK CORPORATION
415 Madison Avenue, New York 17, N.Y.

Gentlemen: Please send free copy of "Short Cuts that Save Millions." F-8

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of office chairs. Service and manufacturing policies of the Aluminum company will be maintained until further details of the transaction are completed, he added.

American photocopy acquires large vacated property

Purchase for more than $1,250,000 of the recently-vacated 10.3 acre manufacturing facility of the Sentinel Radio Co., Evanston, Ill., by the American Photocopy Equipment Co., Chicago, has been announced. Following remodeling, the new building will be used to house the firm's administrative, engineering and research operations, and several additional company activities.

Books and Pamphlets

Satisfying the Salaried Employee, published by the Industrial Relations Division of the National Association of Manufacturers, is a manual designed to build "better relations with all categories of white-collar people." Covering four areas which NAM claims hold the answers to job satisfaction in the office and laboratory, the 64-page manual offers studies in status and recognition, compensation, communication, and supervision. Groups of white collar workers included in the study are technical and professional, clerical and stenographic, supervisory and administrative, engineering and scientific, sales and research, and staff personnel. The manual is priced at 50 cents a copy, with quantity prices on request, and is available from NAM's headquarters at 2 E. 48th St., New York 17.

Written Communication in Business, by Robert L. Shurter. Divided into five major parts, this new book offers a comprehensive treatment of the main principles of business communication, analyses of the most widely used forms of business writing—the letter, report and memorandum—and a discussion of such associated skills as dictation and reading. Considered in detail are the techniques of business letters and self-development on the job. The author is professor of English and director of the Division of Humanities and Social Studies at Case Institute of Technology. Priced at $6, the book is available from McGraw-Hill Book

(*To page* 40)

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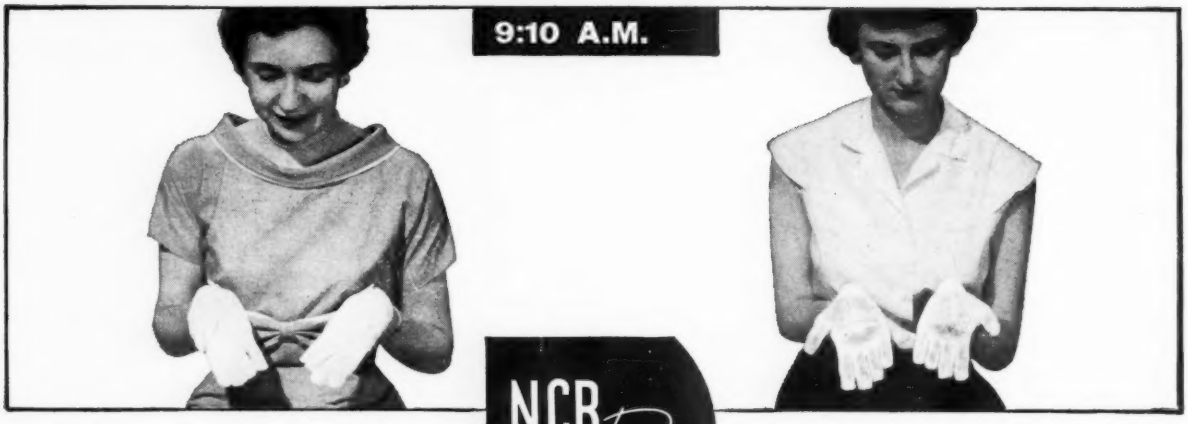

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Coming Events

Columbia U. Executive Program in Business Administration. Harriman, N. Y., August 11-September 21.
Sponsor: Graduate School of Business, Columbia University. *Place*: Arden House.

12th Annual Instrument Automation Conference and Exhibit. Cleveland, Ohio, September 9-13.
Sponsor: Instrument Society of America. *Place*: Cleveland Auditorium.

ACME General Meeting. Hot Springs, Va., September 12-15.
Sponsor: Association of Consulting Management Engineers, Inc. *Place*: The Homestead.

NOMA Automation Conference. Hartford, Conn., September 16-17.
Sponsor: National Office Management Association. *Place*: Hotel Statler.

NRMC 4th Annual Conference on Records Management. New York, September 19-20.
Sponsors: National Records Management Council, Inc.; Graduate School of Business Administration, New York University. *Place*: New York University.

NOMA Miami Regional Conference and Exposition. Miami, Fla., October 6-9.
Sponsor: National Office Management Association. *Place*: McAllister Hotel and Miami Municipal Auditorium.

NIGP 12th Annual Conference and Products Exhibit. Cincinnati, October 6-9.
Sponsor: National Institute of Governmental Purchasing, Inc. *Place*: Hotel Netherland Hilton.

SPA International Systems Meeting. Los Angeles, October 7-9.
Sponsor: Systems & Procedures Association of America. *Place*: Statler Hotel.

NABAC Conference. Atlanta, October 7-10.
Sponsor: National Association of Bank Auditors and Controllers. *Place*: Atlanta Biltmore Hotel.

RSPA General Meeting. Chicago, October 8-10.
Sponsor: Railway Systems & Procedures Association. *Place*: Morrison Hotel.

SAM Conference on Progress in Measurement of Management. October 24-25.
Sponsor: Society for Advancement of Management, Inc.

9th Annual Office Management Conference. College Park, Md., October 24-26.
Co-sponsors: University of Maryland and Area III, National Office Management Association. *Place*: University of Maryland.

National Business Show, New York, October 28-November 1.
Sponsor: Office Executives Association of New York (New York Chapter of the National Office Management Association). *Place*: New York Coliseum.

CIA Annual National Conference. White Sulphur Springs, W. Va., November 1-4.
Sponsor: Controllers Institute of America. *Place*: Greenbrier Hotel.

with the EDITORS

NEW YORK firms—and probably many more in other parts of the country—are throwing away some time-cherished concepts in their current competition for office workers. Recruiting new employees through those already on the payroll is not new, certainly, but it is now becoming such a widespread practice among large employers that it could almost be described as a standard pattern. What is new is the increasing willingness—even eagerness—of firms to hire relatives of employees already on the payroll. That is a reversal of the usual pattern in times past.

HOW is it working out? In the New York firms reporting, it seems to have caused no difficulties at all so far. Some fears that employees would be disgruntled if those they referred on to the company were not subsequently hired have proved groundless. In the first place most employers' experience has been that employees are very reluctant to recommend people—even relatives!—who aren't pretty good prospects. Furthermore, they don't expect their recommendations to be automatically accepted even though they meet the employee's best estimate of the company criteria.

AND, because by and large present employees do know their company, can make a fairly realistic evaluation of those among their friends and relatives who will work out, and those who won't, employers find that their acceptance rate for employee referrals is substantially higher than it is for other recruiting sources.

IT'S a pattern that can be profitably exploited by large employers who need a constant source of workers—and can certainly be adapted to the needs of smaller companies as vacancies come up. It's cheap—one large company estimates that recruitment activities through workers already on the payroll cost between 75 cents and one dollar per year per employee. It gives a higher percentage of acceptable employees than the more orthodox methods. It helps to make the company's concerns the employees' concerns—and such identification is one of the cornerstones of a good communications program.

AND, to be completely practical about the matter, it's one more source of recruits in a situation where all sources put together never quite meet the demand.

SO, if you have a current policy of excluding the sisters, the cousins, and the aunts of those already on the payroll—and are faced with chronic personnel shortages, why not weigh seriously the merits of the no-relative rule as compared with the experience of the companies that have dropped it.

Robert M Smith
Editor

There's safety in the shine

if there's Du Pont Ludox®
in the floor wax

Her hurried steps across highly polished floors are *safer* steps because there's "Ludox"—Du Pont's anti-slip ingredient—in the floor wax. Tiny, *transparent* "Ludox" spheres in the wax exert a "snubbing" action on every footstep ... arrest the foot's forward motion ... give the foot positive traction.

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editorial

From Coffee Break to Luncheon?

NOT VERY MANY YEARS AGO, *Office Management* walked into a hornet's nest when it took a small editorial survey on office attitude toward the coffee break. The custom of the "second breakfast" had been spreading for a number of years but in general against pretty stiff opposition, and it was surprising to discover how many executives were still ready to denounce it and vow that the custom would never gain entrance to their offices.

So now it's lunch! In a growing number of big offices management provides good food at low cost and a pleasant place to eat it, to take care of employees who have earlier in the day enjoyed a taken-for-granted coffee break.

The coffee break, in most cases, represented a victory won by employees over reluctant management; office service of lunch where it exists represents voluntary recognition by management of such service as a new and effective method of increasing employee good will.

In an article in a recent issue of *Time* on the subject of company meals and the extent to which this practice is spreading, *Time* calls particular attention to "one of Manhattan's newest and biggest restaurants," in Socony Mobil's new offices, designed "to give 2,400 employees bargain food at a sizable loss to itself every month."

Time estimates that last year 41,000 companies served some 23 million meals each working day to their employees in plants and offices and spent more than $3,000,000,000 on food serving equipment.

And the profit is measured in terms of getting and holding good employees.

Teaching assignments are considered excellent training for the rising executive

Today every company can afford an executive development plan

Early selection of best potential candidates, followed by intensive guidance and evaluation on wide range of jobs, can give elements of an effective program—

by Robert M. Smith

"THERE's always room at the top. . ."

"The greatest shortage in business today is in the number of men worth $25,000 a year or more . . ."

"Sure, we raid other companies for executives. Who doesn't?"

The phrases, the analytical articles in business magazines, the almost universal opinion that the shortage of top managerial talent is far more severe than the better publicized shortages of engineers or clerical workers, probably exaggerate the dimensions of a problem facing American business—but they underline the fact that there is a problem and a real one.

Where is business, expanding almost daily in size, and in variety of functions, to find enough top managerial talent to continue to function efficiently? Where will it find the people to replace today's leaders when they retire or die?

More and more businesses have learned, to their sorrow, that there is not always an adequate replacement in the company when a key man leaves, that they are faced with two rather unsatisfactory alternatives when they have a top management position open: arbitrarily to promote one of their own people and hope he will work out on the job, or to hire a qualified man away from another company.

To avoid exactly this situation, an increasing number of companies are, for the first time, deliberately "growing their own" executives—not just through the normal progress upwards which qualified people can expect to take in most companies, but through a planned program which will insure that the company always has a pool of well-trained talent from which any top vacancy can be filled.

But this process in turn poses new problems for a company. What are the characteristics of a good executive? And how, once you have identified these characteristics, do you determine whether people who have just come with the company possess them, whether they are personnel who might eventually be qualified to hold a top management position?

Problem relatively new

This is, as a problem, a basically modern one. In the old days of the family-owned business, or closely held corporation, the heirs or the major stockholders naturally took over management functions. If they were competent, the business continued to prosper. If they didn't know what they were doing, the business fell by the wayside. But today, the average corporation is no longer an entity in which the "owner" plays much part. There is no owner as such; there is instead a mass of stockholders, guided by a professional management which itself may own no part of the company. The management technically, is composed of employees, but these employees are also arbiters of the company's welfare and prosperity.

Thus, it becomes management's responsibility as the directing force in the company to provide its own replacements, to designate its own heirs, as it were.

And it is this realization of a new necessity which has created the great current interest in a comparatively new arrival on the American business scene—the management development plan.

Formal programs are still restricted largely to the major corporations—which are the groups where management is most completely divorced from ownership. But the findings and results of the large corporations have validity for the smallest company, since the characteristic principles of management development plans are strikingly similar in company after company, even though the details vary considerably.

And the basic principles can be applied by any company interested in identifying its best potential executives, and then preparing them for top management responsibilities.

For one of the striking conclusions found in most of the companies that have instituted management development programs is that the formal schooling, the elaborate training organization within the company, is usually of less value in preparing top executive replacements than the preparation that can be given right on the job.

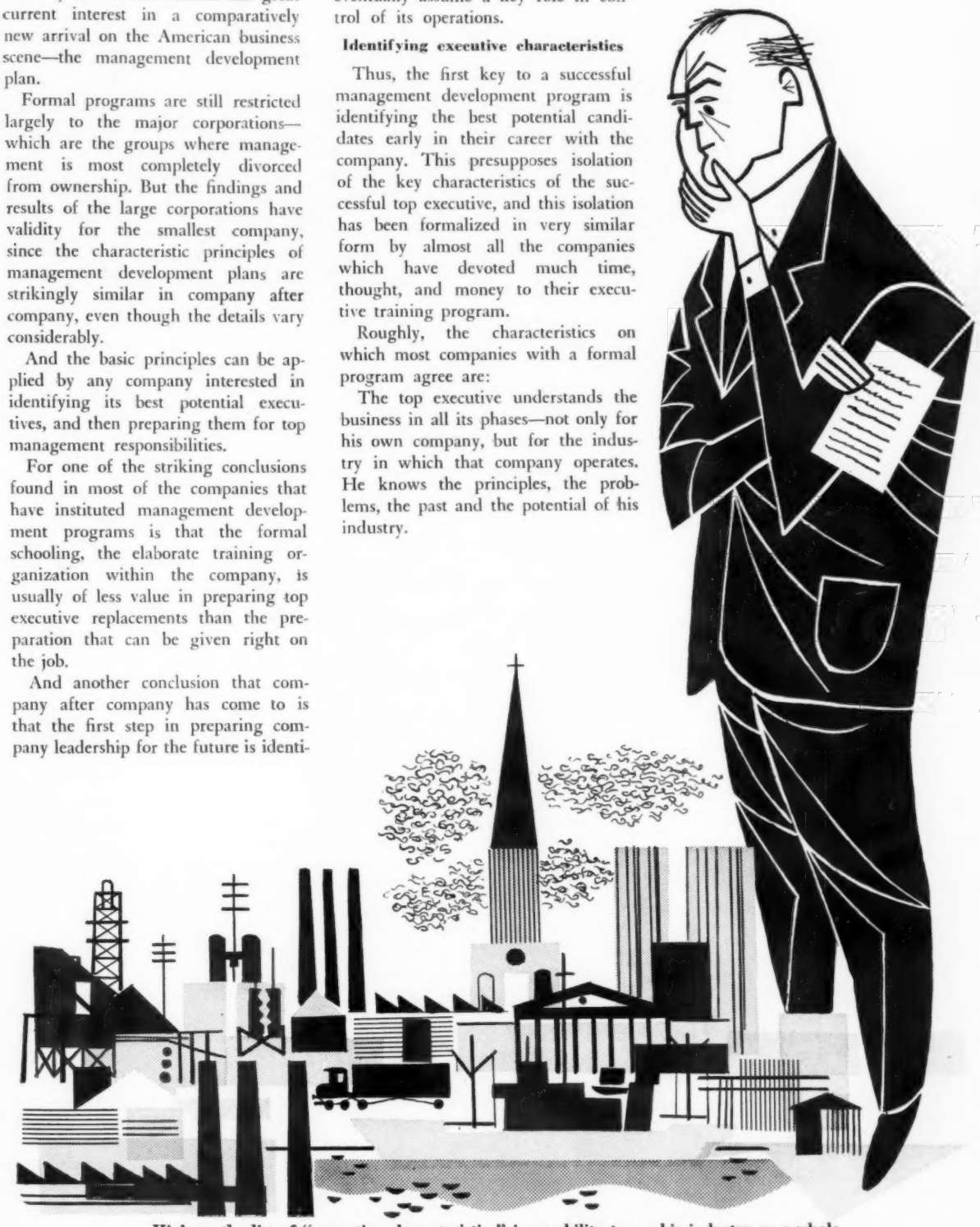
And another conclusion that company after company has come to is that the first step in preparing company leadership for the future is identifying the best potential candidates early in their company career, and then offering them, through varying job experience in the company, the possibility of becoming well enough acquainted with all its activities to eventually assume a key role in control of its operations.

Identifying executive characteristics

Thus, the first key to a successful management development program is identifying the best potential candidates early in their career with the company. This presupposes isolation of the key characteristics of the successful top executive, and this isolation has been formalized in very similar form by almost all the companies which have devoted much time, thought, and money to their executive training program.

Roughly, the characteristics on which most companies with a formal program agree are:

The top executive understands the business in all its phases—not only for his own company, but for the industry in which that company operates. He knows the principles, the problems, the past and the potential of his industry.



High on the list of "executive characteristics" is an ability to see his industry as a whole

He has the ability to make decisions *when* there are sufficient data available to make a decision feasible, or, if it is impossible to gather enough data before the decision must be made, has the courage to make a decision on the basis of the best information available and his own common sense and knowledge.

He has the courage and determintion to carry a plan through once it has been made.

He has a spark of "divine discontent"—he continues to try to make the company product or services better always, the company functions more efficient.

He has a realistic picture of himself—both his advantages and his shortcomings.

He can work well with people.

Now, if these are generally accepted as the major characteristics of a good executive, that's all well and good. The problem remains: how to identify among the incoming people those who can be expected to show these characteristics as they move up in the organization. For that is another one of the few major principles that most companies that have experimented with management development programs agree on: to be effective, they must "guide" the trainees with a view towards their eventual movement into the top echelon.

Lyndall Urwick, a British writer on management subjects, compares the good management training program to the officer corps of one of the armed services: the group from which top managers will be eventually chosen is identified early, and then, on the basis of individual performance records, further training, and rotation through various jobs, is gradually guided upward, until at the end, the outstanding men of the group move into the top command positions, as they become vacant.

A realistic picture of his own capabilities distinguishes the executive

Performance main factor

The basis of advancement in the armed services has always been specific performance on the job—on every one of the many different jobs an officer holds throughout his career. This is another point on which the management training programs agree—the very heart of any program is the individual himself, and his performance. All other activities are geared to that.

But that still leaves the problem of identifying the individuals who will form the "executive pool" early in their career, and even whenever possible, directly recruiting such individuals for service with the company. This is being done by most large concerns today by scanning the graduating classes of the colleges, and picking the best candidates from those classes as executive trainees.

At this point, however, many American companies are making a mistake, according to authorities in the field, because their objectives in the management training program are not sufficiently clear cut. Because of emphasis on immediate utility to the employing company, the preference is given to graduates with technical accomplishments which can be put to immediate use by the employing company. This, authorities point out, can actually be very shortsighted, since many top grade candidates without such technical training may be passed over in favor of second rate men with technical training. Their immediate utility to the company may be greater; their ultimate value infinitely less.

Moreover, one of the keynotes of most successful executive training programs is "job rotation"—a deliberate exposure of the candidate to all phases of the business, which in turn can lead him to the first qualification of the successful top executive: a knowledge of the basic principles by which his entire industry operates. But a candidate selected primarily for his immediate utility to one phase of the company's operations does not necessarily carry that usefulness over to the next job he is moved to in the company. After all, the object of rotation is to expose him to the widest possible variety of company operations, so the technical accomplishments most valuable to one job may be completely superfluous on the next.

But the colleges alone are not enough as a source of recruitment according to the men who have made the most thorough studies of the subject and the companies with longest experience. A good management training program must also make provision for promotion into the potential executive training cadre from the ranks of employees—and it must select the most promising employees early in their career just as it designates its incoming college graduates at the moment of entry as a possible nucleus for further management development.

This means that the basis of any selection for management training is not only job performance: selection also requires a formal program at the very lowest levels of job evaluation and analysis of individual performance, to identify the most promising employees for inclusion in the group which will be prepared to move up into the upper echelons of the company.

Why is such a program necessary at all? Why not the traditional method in which employees move up according to their abilities, the strongest continuing to progress to the very top?

That is no longer enough, according to the proponents of management development programs. Such an informal catch-as-catch can arrangement provides an excellent array of number two men—men qualified to head specific departments, but men who are not usually qualified to make major policy decisions for the company as a whole. The normal progression without a plan is for a man to move up in his own department, becoming more and more of a specialist in his own field. Only after he has already spent a great many years with the company and has achieved a position of some responsibility does he begin to come into intimate daily contact with the other functions of the company.

That early selection for executive

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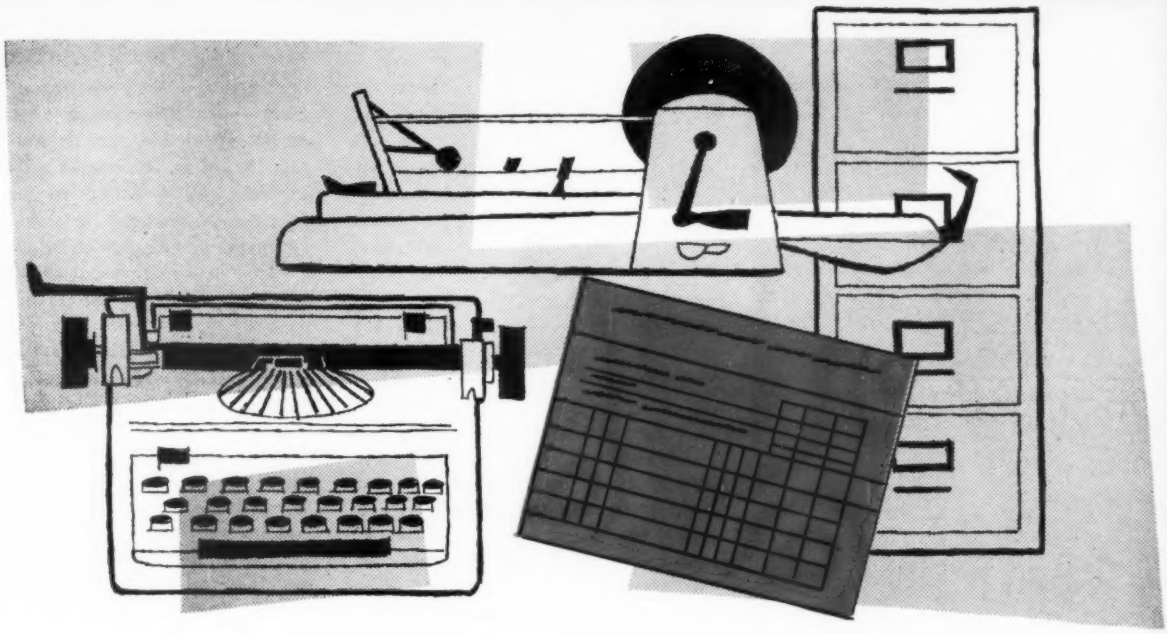

How a small office can design its own forms efficiently

Forms design need not be a mystery, nor does it require a wide array of specialized equipment. Here's the way to design good forms with standard office tools—

by Morton Gluck

MANY HEADS of small offices have seen the need for improved forms design in their own offices but have been frightened off by the cost of professional services or the complicated principles and numerous tools required to do it themselves.

When a form is prepared in multiple copies, used in heavy quantity, and is a vital part of an involved procedure, there can be no substitute for the trained forms designer. But this is not true of the majority of the forms used in a small office. For such forms, the average, competent office manager can set up efficient attractive forms by following a minimum of guides and using only an ordinary typewriter and other equipment already available in his office.

Most competent office managers are aware of the basic principles of forms design. They know the difference between columnar style (as in bookkeeping forms) and box style (boxed in, coffin shaped entry spaces); they are aware of the value in numbering forms, keeping to standard sizes and the numerous other factors in "advanced" forms design. The problem, like that of thousands of others in small offices, is how to *apply* these principles.

Let's assume you have no draftsman on your staff, or special typography equipment in your office. You use only 25 or 30 different forms and far less than 10,000 of each annually. The volume does not justify buying the equipment or getting outside service.

Yet, your forms do need improvement.

You can design forms, using only available office equipment, which can be typed by a competent typist and run off on your office duplicator. However, you must accept limitations; you will have to avoid multi-purpose, snap-out and other specialty forms. You will not be using varied type faces, line weights or types of paper. Within these limits you can prepare forms at low cost which will be a considerable improvement over those now in use.

The basic tool in preparing simple forms is a spacing guide. Since most forms are filled in by typewriter, the spacing guide must conform to that typewriter. For most simple forms, adequate provisions can be made for hand written entries by increasing the typewriter horizontal spacing 50 percent and using double-spaced lines. Standard office typewriters have either pica (10 spaces to an inch) or elite (12 spaces to an inch) type. A few offices which prepare many tables or special reports use typewriters with extra-small type. One such type size, micro-elite, has 18 spaces and 8 lines to an inch. You will need a spacing guide for the largest standard type in your office and one for the smallest type. Thus, if the form is to be filled in by a pica machine, you will need a ruler divided into tenths of an inch for the horizontal spacing; elite spacing will require a ruler with twelfth inch divisions. Both will require a guide to measure a sixth of an inch for each vertical line. The large guide will be used to measure entry spacing; the small to measure captions.

BASIC STEPS FOR "DO IT YOURSELF" FORMS

1. Make, or buy, a spacing guide, right angle triangle, and lay in sandpaper and colored pencils.
2. Decide the single, major purpose of your form. When you're doing your own, avoid the multi-purpose form!
3. Prepare the most pertinent question and column entries you can devise—and then eliminate everything that is not necessary!
4. Check your paper size, and make sure the machines you plan to use will accommodate it.
5. Check your proposed form on the firing line—with those who must use it.

If you do not have such rulers (and chances are that you do not), your typist can prepare one easily on the appropriate typewriter. Insert a sheet of stiff bond crossways into the machine and type, as close to the edge as possible, a line of four periods and a numeral one, four periods and a one all across the page. Then, reinsert the sheet the normal way and next to the line of periods, type a column of underscores. Turn the sheet crossways again and type in the kind of type and the measurements; as: "Pica type, 10 spaces, 6 lines to the inch." Your rule will look like that shown in Figure 1. Cut off this strip of typing and glue it to the back of a ruler, flush to the edge. You now have a spacing guide.

Most professional forms designers draft their forms on grid paper. Ordinary ten cent store graph paper divided into tenths of an inch is suitable for pica horizontal spacing but you will need a sixth of an inch guide to measure lines. Some stationers carry grid paper divided into twelfths of an inch. This works well for measuring vertical lines and elite horizontal spacing but you will need a tenth of an inch guide if you use a pica typewriter. Grid paper is convenient but not essential.

You will of course need pencils: No. 2's for preliminary sketching, No. 3's for final drafts, and a few blue and red pencils. Always keep your pencils well pointed. Rolling the point slightly across fine sandpaper produces a sharp point; remember to blow the excess lead off both the paper and the pencil to avoid smudging. For a few cents you can buy a draftsman's sandpaper block designed for pencil sharpening. Anyone who uses a pencil also needs an eraser for second guessing. A celluloid right angle triangle is a handy tool but a good stiff piece of cardboard with a square corner will serve temporarily. You now have a complete kit of tools.

What is the purpose?

The first thing to do is to put aside those tools and make a decision. What is the purpose of the form? You will find it best at first to avoid multi-purpose forms. Multi-purpose forms are excellent time and money savers—after you have gained proficiency in forms design and after you have made a thorough methods analysis of all the procedures related to the proposed form. But in too many cases, the multi-purpose form is like the housewife's tool that opens bottles, peels potatoes and diapers the baby. It ends up by peeling the baby and diapering the potato. Initially at least, stick to the simple, single-purpose form.

With the purpose of the form in mind, list on a piece of scratch paper every caption that you believe should be on the form. The caption is the question or column heading that indicates the entries (type of information to be inserted). Don't worry about the wording; just get it down. It is usually a good idea to check for more ideas from the people who will use the form, both those who fill it in and those who refer to it after it is completed. Indeed, it is a good idea to check with them after every step in the design process.

Now, take your blue pencil and with a firm hand, strike out every potential which does not fully conform to the purpose of the form. Watch out for the item that is "useful information" which you may use "someday." Every extra item not only makes the form harder to design, but adds work for the people using the form. Keep it down to essentials.

In listing the captions, you probably followed, in a general way, some logical order. However, if you check back with the people using the form, you will find that what is a logical order for those filling it in may not be for those who extract information. Decide which of these "logical" orders is most efficient or what compromise can be made among them. Then number each caption in that order. If one of the captions is to be used to index the forms, it will be placed in the "index corner"—upper right for most forms, lower left for visible index cards. When you have reduced the captions to the minimum, they should be reworded as they will appear on the form. Unless you are certain that the form will never go outside your immediate office, avoid uncommon abbreviations or shop talk. Use terse, simple, and above all, understandable English. Full sentences are unnecessary but make certain that the user will understand the caption. Check your final list with someone unfamiliar with the procedure in which the form is used to see if he understands it.

The final step before actually laying out the form is determining paper size. The sheet must fit the manner in which it is used. You must be able to run it through the duplicating equipment you have available. If it is to be typed, it must fit the typewriters. Most important, if it is to be kept any length of time it must fit the equipment in which it will be kept. A form filed among other forms or correspondence should be of the same size. If the form does not meet these limits it will either have to be folded, or pasted to a sheet of the proper size. In either event, both the time and cost involved in handling the form will increase.

These limitations may result in a form too small to contain all the information needed. You will then have to decide between running the form front and back, adding pages or using a larger size sheet despite filing difficulties. One word of caution: stick to standard size sheets or even subdivisions such as half or quarter standard sheets. This may result in more space than you need but the cost of extra paper for forms used in small quantity will be less than the cutting, handling, and filing costs involved in using your standard sheet. If your regular paper size is not suitable, your stationer can advise you of a suitable size such as legal size, index card size or notebook binder filler. However, do not order special paper until you have made certain that it meets all your size requirements and until the final design has been set. Throughout the design process, you may have to make adjustments in factors previously considered.

It is well to determine paper stock

at the same time as sheet size. Some sizes may not be available in the stock desired. However, paper selection for most small office forms is usually simple—use the same type paper as you would for correspondence, reports, or rough drafts used under the same circumstances. If the form is to be made out in multiple copies, you will need tissue second sheets. If it is to be kept a long time or to receive much handling, you will want a good bond. It, of course, must be the kind of paper that can be used in your office duplicating machine. Very often these needs conflict. Again, the only solution, short of getting outside assistance, is to reduce your requirements in one area or compromise the conflicting needs.

The factors used in deciding sheet size will also determine margin size. There are three different margins which must be considered. The limitations of the office duplicator will determine the Printing Margin. For example, a stencil duplicator which accepts a sheet 8½ inches wide may only reproduce a seven inch line; you will then have a printing margin of 1¼ inches on *each* side. If the form is to be kept in a binder, a margin must be left for the stapling, punching or other binding factors. Information which is to be used after the form is bound must never be inside this Binding Margin. The final margin is the Entry Margin. Where space permits, there should be at least 3/10 inch margin all around. If the form is to be filled in by typewriter, there should be no provision for entries higher than a half inch from the top or 3/4 inch from the bottom. More space is desirable. Remember also that your typewriters may not type a full line across a sheet. For example, a machine with an 11 inch carriage will take a sheet 11 inches wide but may only type a nine inch line. Check your typewriters.

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....1....1....1....1....1....1....1....1....1....1
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"Pica type, 10 spaces, 6 lines to the inch"

Figure 1. A spacing guide which any typist can make

You now know what is to go into the form and in what order, sheet size and margin width. Now, and only now, are you ready to start designing. Take a sheet of scratch paper of proper size, draw in the margins, and start laying out the form. If the entries will be largely numbers, you will probably use the columnar style with captions at the top and sometimes at the left of the columns. For most purposes, however, you will find the box style, with caption in the upper left corner preferable. There are variations of the box style for special purposes. It is a good idea to examine the various forms received in the office to get some ideas on forms design. The Federal tax forms for example will give you many ideas—some of them on forms design.

Start with item number one in the upper left corner inside your margins and work your way across and down. All the boxes should be at least 1/3 inch deep (typewriter double space). Notice carefully, however, if you are using either elite or pica type for your captions, the box may have to be triple spaced (½ inch deep) to provide enough room for the entry. In box style with captions in the upper left corner, the entry is usually under the caption. The box must, of course, be long enough to contain the longest expected entry; determine the number of letters in the entry, measure it off with the spacing guide for the largest size type, add two spaces for margin and using your cardboard square corner draw a vertical line. Sometimes, unavoidably, the caption will be longer than the entry; measure that off in the same way, but use the spacing guide for the smallest available type.

As you draft the form, you may find it necessary to reword captions to fit them to the available space (but don't sacrifice clarity) or to make minor

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Decentralized procedure writing can be carried out on company wide basis. Each division prepares

Why not let operating departments draft their own procedures?

Decentralizing procedure writing by letting line people prepare first draft, specialist write final version, saves time, insures procedures improvement—

by Ray Marien
Manager, Forms Control and Procedures, Olin Mathiesen Chemical Corp., New York

WITH THE EMPHASIS in business today on decentralization, it becomes necessary for many companies to tailor their procedures program to their specific organizational needs.

Obviously, procedure writing can best be handled by many companies through one central department established for that purpose. Yet, to a large degree, many of those so-called centralized procedures are actual'y written on a decentralized basis. Why not carry this theme out to its logical conclusion?

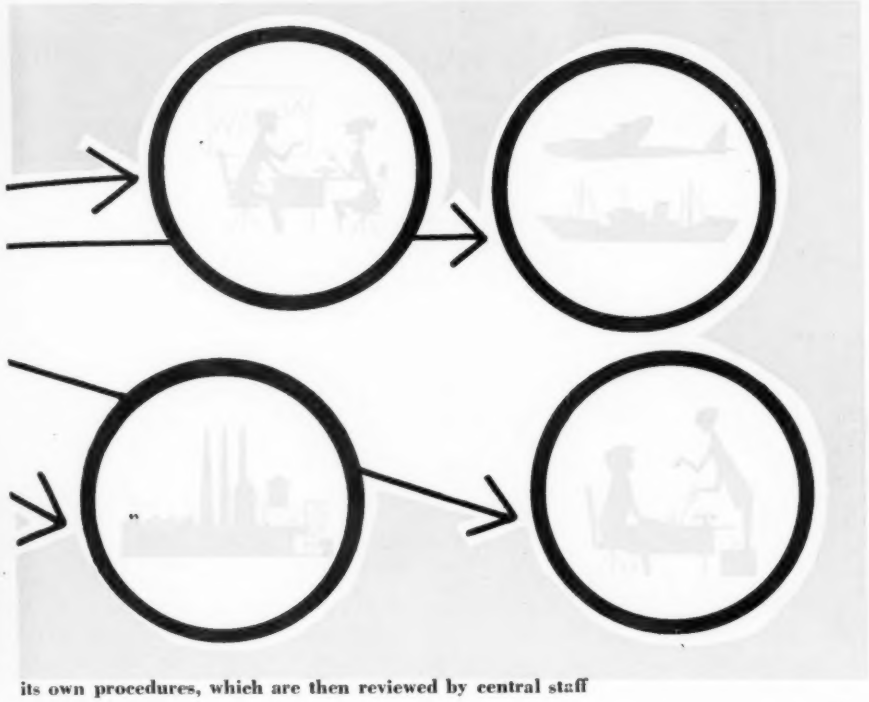
For instance, suppose a procedure on the handling of leased automobiles is necessary. Who should write it? Well, in our opinion, the initial writing of any procedure should be done by the department responsible for the carrying out of that procedure. This means simply that the auto leasing department in the company in question would draw up the rough draft. If the procedure happened to be on group insurance, the group insurance people would prepare the initial draft, and so on. This is only the preliminary step, of course. Next comes the circulation of the rough draft, then suggested revisions, a possible second draft, then a third, until finally the finished version is ready for distribution.

Under a fully decentralized procedures program, each major segment of the company would have its own procedures man or staff. When the time arrives for a specific procedure to be written, that particular procedures man does nothing at first other than to provide the initiating department with a copy of the format for procedure writing. This format, actually a procedure for procedure writing, tells how to set up the paragraph structure, numbering sequence and spacing and also lists the proper areas for specific information. (See Figure 1.)

For example, Paragraph I might be set aside for the *Purpose* of the procedure. Paragraph II for the *Scope*, Paragraph III for *Locations Concerned*, and so on.

In addition, the blank forms to be used in preparing the draft should be furnished to the initiating office, as well as a list of suggested action verbs, and perhaps one or two sample procedures. With this material to work with, one need not be an expert to prepare a rough draft of a procedure.

After the final version has been drawn up and approved, it should then go to the procedures man for editing, polishing, checking for accuracy of names and distribution, adherence to



its own procedures, which are then reviewed by central staff

the format and so on. When he has finished with it, it is ready for issuance.

If this seems to make the procedures man into a glorified rubber stamp, that is not the case. What actually happens is that procedures begin to come in from everywhere and are consequently finalized and issued in rapid-fire fashion. If, as is the case in some companies, the procedures man is the only one writing procedures and he has to start from scratch, follow through each step and nurse it along to its final stages, he may take *months* to write one finished procedure. Under the proposed method, "everybody gets into the act," and badly-needed procedures do not have to wait in line for the available time of the only writer around.

Next, we come to the question of *improving* present procedures. Well, actually, this is a metamorphic process. As they are written along the established lines of the format, the inadequacies often spring out at the writer as he prepares his draft. If they are particularly complicated, a flow-chart is the next logical step. Again, we wish to point out that there is nothing any more difficult about flow-chart preparation than there is about pro-

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3. Procedures previously issued should not be renumbered to fall in line with the new numbering system. Instead, new numbers can be assigned when these procedures are revised.

C. Paragraph Numbering

The formal structure of paragraph numbering is to be used, as follows:

I, II, III, etc. Major paragraphs or parts of procedure.

A, B, C, etc. Paragraphs within I, II, III, etc.

1, 2, 3, etc. Paragraphs within A, B, C, etc.

a, b, c, etc. Paragraphs within 1, 2, 3, etc.

Note: An example of this would be the paragraph numbering of this procedure.

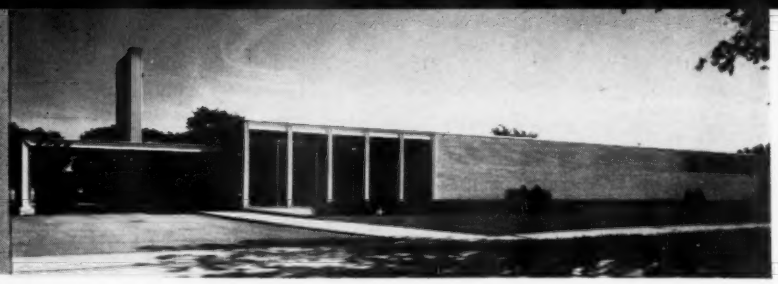
D. Paragraph Contents

Certain paragraphs should be reserved for areas of information common to all procedures. This arrangement should be used insofar as possible. i.e.:

1. Paragraph I: Purpose of Procedure (or Introduction)
2. Paragraph II: Scope of Procedure (What does it cover?)
3. Paragraph III: Locations Concerned
4. Paragraph IV: Responsibility (for putting the procedure in effect)
5. Paragraph V: Forms used in Procedure

Figure 1. Format used to guide line personnel in procedure writing

The new executive office headquarters of Cory Corporation in Chicago, from which management will direct operations of the entire firm, points up the current trend to "decentralization in the office."



New centralized office serves decentralized functions

Spacious, funtional reception room is designed for hard use

Large Chicago electrical appliances firm even sectionalizes general clerical office to permit various managements access to separate working areas—

by Frederick Vogel

RECENT construction of an "operational" building to house executives and office personnel of the Cory Corporation and associated companies emphasizes once more the continuing trend of today's management to decentralize operations—to separate, as it were, administrative from factory facilities.

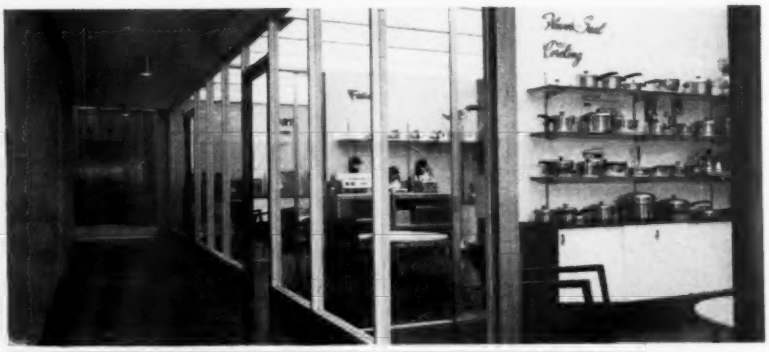
Located on the northern perimeter of Chicago, the new one-story brick and glass building, already the recipient of an award for "outstanding" design, will serve as home office for the executives who direct the affairs of the large electrical appliances firm. Among associate companies included in the new quarters are Nicro, Fresh-

Spacious sectionalized general office is centered in rim of executive offices

Comfortable president's office accents harmonizing tones of beige, walnut in furnishings

Glass-partitioned offices, used by various company officials, permit atmosphere of privacy

Lavatory walls are of sandlewood cane-textured plastic



Corridor leads from reception room, opens into showrooms

Company coffee room features beige-brown-coral color scheme

Separate sections incorporated in overall pattern distinguish new building

'nd Aire, Autopoint, Flavorseal-Coreling-Alsdorf, and Mitchell Air Conditioning.

In order to consolidate the operational activities of each of these companies under a single roof, the interior of the building was designed to allow each firm to enjoy "separate" sections, and yet to form a pattern best suited to enhance coordination of function. A central lobby, embracing a separate entrance for office personnel, is located at the extreme left of the building. This area opens to the right into a corridor which connects a row of company showrooms, and to the front into the services department, lunch room and mail room.

These showrooms are supervised by sales managers, each of whom has his office located adjacent to his particular showroom area. Directly across the corridor from the showrooms are situated the offices of the vice presidents in charge of the various companies represented. Behind these latter offices are located the working areas of the office personnel of each of the organizations.

At the far rear of the floor, housed in its own specially-zoned, sound-proof section, is the "IBM Room," where various office machine equipment is installed for use by all of the companies. To the right of this section, extending more than half way along the east wall, are the private offices of other officials of the associated companies.

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Reports can be strengthened if competing salesmen are shown the rough draft

How to select the best machines for your office's needs

Here's a simple four-point program by which to evaluate competing office machines realistically, in terms of costs, results, and suitability to your needs—

by Walter S. Athearn
Systems Administrator, Aeronautical Division, Minneapolis-Honeywell Regulator Co., Minneapolis

IS THERE a quick and simple method for determining which of possibly a dozen types of office machines would be the best for the job?

That question plagues nearly every management seeking to help its company pick the "best" offset duplicator, fascimile copying machine, collator, white-print machine, or whatever.

If there is such a method, it must provide an answer to the problem quickly, it must present all the facts for swift and easy scrutiny by management and purchasing, and it must, of course, recommend the most logical machine for your firm's operations.

Complicating any attempt to "methodize" a quick, sure choice of equipment are a variety of factors such as special features on some machines, operating methods, and costs—both immediate and long-run.

Out of the maze of fact and opinion that is offered for your consideration, you are expected to guide your company on the office equipment path that is the easiest and quickest to follow. You are expected to have an Ouija board, but what you really need is a concise pattern to help you answer certain basic decision-making steps. Such a pattern might include these points:

1. Plan your survey and stick to the plan; avoid tangents; look first for short cuts.

2. Compare dollar costs; operation costs are usually *more* important than initial equipment costs.

3. Compare variables; know what you want the equipment to do.

4. Organize your survey into a meaningful report.

Before embarking on a thorough study, become familiar enough with the machines available to be able to spot any major factor which might disqualify it for your use. If a spirit duplicator doesn't have an automatic feed, and the application calls for long-

Basic Costs

	Machine A	Machine B
Equipment (with accessories, freight and taxes)	$675	$800
Time per set (including set-up and put-away)	45 sec.	30 sec.
Labor at $1.25 hr. (midpoint of Gr. 1)	$.0156 set	$.0104 set
Paper, per set (35M-set lots)	$28.95 M	$27.00 M
Supplies (powder and chemicals)	$ 3.00 M	$ 3.50 M

Cost per Year for 50M Sets

	Machine A	Machine B
Equipment (6 yr. amortization)	$ 112.50	$ 133.33
Labor	780.00	520.00
Paper (50M sets per year)	1,447.50	1,350.00
Supplies	150.00	175.00
TOTAL COST PER YEAR AT 50M YR.	$ 2,490.00	$ 2,178.33
COST PER SET	4.95c set	3.46c set

SAVINGS PER YEAR—MACHINE A OVER MACHINE B: $311.67

run use, forget that brand. If you need a justifying-margin typewriter, eliminate those without that feature.

No matter how deeply you become engrossed in a study, when one of these short-cuts appears, track it down and confirm it immediately. It can save days of effort.

Basic to any decision are the dollar costs to your company. Figures from other companies mean little, and are at best only a reference.

Not all cost figures have meaning. Of what concern is the space a machine takes up if both (or all) of the machines being studied take the same space? Or, if both require little service, forget service costs.

Use cost-per-year as the factor to aim for in order to avoid the inaccuracies of first-year costs, costs of change-over, etc.

Among the cost factors to measure in a particular purchase, these may be major:

1. Equipment
2. Labor
3. Paper
4. Supplies
5. Service and Repairs
6. Space
7. Installation

Determine cost per year

Cost of equipment includes purchase price with the desired accessories, plus freight and taxes, less trade-in or sale of present equipment. To get the per-year cost, divide this figure by your company's cost-accounting figure for amortization—5 years, 7 years, 10 years—whatever it is. If none has been established, 5 to 7 years is a common life expectancy for most office equipment.

If only one machine has a certain desired accessory, leave that accessory out of the cost comparison, but deal with it in the later part of the study. Compare as you would with equipment.

When all or part of an existing machine is replaced, even if the present machine is kept and used for another application, credit the cost of the machine or the portion of it to the proposed system.

How to find labor rate

First determine the hourly labor rate for running the machines. If your company has established labor grades, take the mid-point of the lowest labor grade capable of performing the operation, to avoid the factors of new or old, skilled or unskilled employees.

Then determine, by experience, by test, by time-study, or by the experience of other companies with parallel systems, the number of minutes required to complete one cycle on the machine, reflecting average, not special, conditions as closely as possible. If invoice sets are run on a duplicator, and 75 sets per hour is an average production speed, use the time factor of 60/75 or 0.8 minutes per set. (Include set-up and put-away as well as running times.)

Next, determine the anticipated usage per year. Perhaps the system calls for 10M sets per year, or 60M, or 90M. Multiply the time per set (or copy, or job) by this quantity-per-year to arrive at the hours per year the machine would be actively used. This factor times the hourly rate gives labor cost per year for the machine.

Although a machine may require a full-time operator to run, the annual wage of that operator should not be used, because the fact that one brand

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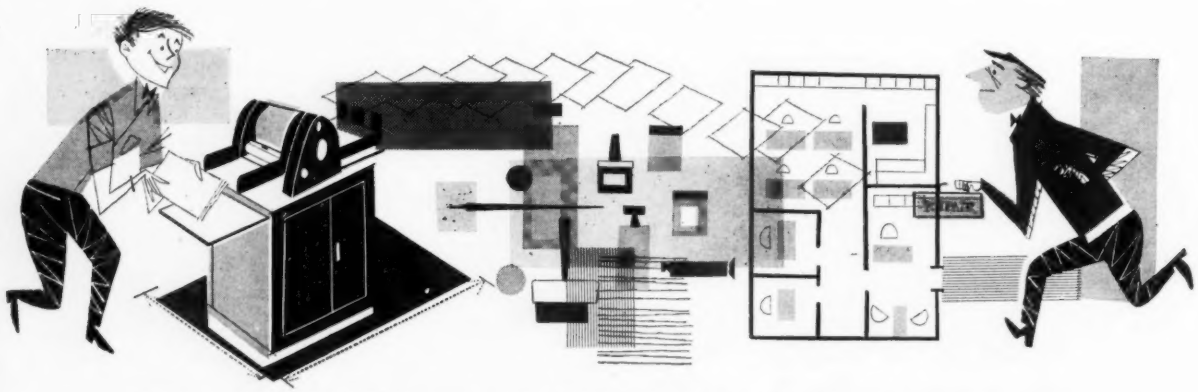


Labor costs, unit production costs, service charges should all be considered in machine costs

How operations research techniques can be used by smaller companies

New methods, techniques offer management a chance to reduce risks in decision-making, policy planning

by John Hockman
System and Procedures Officer, Steinberg's Ltd., Montreal

AUTOMATION in the plant or in the office is still something of a distant objective for most businesses. There is still an enormous volume of planning and investigation to be done, people to train and equipment to install.

Managerial automation sounds by comparison like a Utopian dream. It is not even as difficult to apply. It is in fact being applied by some companies which are still a long way from automated production. Applied to a limited extent only, it is true, in certain fields of activity: but with considerable success.

Moreover, it can apply in companies far too small to afford large-scale computers and the other paraphernalia of conventional automation.

After this rather revolutionary announcement we had better define exactly what we do mean by "managerial automation."

It does not mean for a minute, of course, that machines — electronic, atomic or any other kind—can replace managers. But one of the characteristics of management, up to now, has been the capacity—and the responsibility— to take decisions on the basis of such facts as were available, plus a great deal of intuition developed from long personal experience. Hence the contention that management is an art, rather than a science. With the techniques now available—and this means now—the process can be made much more scientific and much less "artistic." The "hard-headed business man"

Table I

MACHINE AVAILABILITY ANALYSIS

Department	Fabricating	Assembly	Finishing
Total hours available	4,300	7,000	6,100
Expected down-time %	7%	6%	5%
Expected down-time—hours	300	400	300
Additional allowance for simultaneous breakdowns*	200	200	200
Machine hours available	3,800	6,400	5,600

Table II

PRODUCT & MARKET DATA

Product No.	Product	Potential Market (units)	Production Hours: Fabricating	Production Hours: Assembly	Production Hours: Finishing	Profit per Unit
1.	Self-slipping jig borer	9000	600	1100	950	$7.50
2.	Self-slipping Jig sander	10000	900	1300	1200	7.00
3.	Non-abrasive grinder (flat)	13000	600	900	700	6.50
4.	Non-abrasive grinder (round)	11000	800	1500	1300	6.00
5.	Lock-nut base reamer (lge.)	10000	500	1000	900	5.50
6.	Lock-nut base reamer (med.)	12000	500	600	500	5.50
7.	Lock-nut base reamer (sml.)	20000	600	1000	800	4.25
8.	Self-abrading bearing rollers	18000	400	800	800	4.00
9.	Screw-cap base mounting 1"	10000	200	400	350	4.00
10.	Screw-cap base mounting ¾"	15000	200	300	400	3.00
11.	Screw-cap base mounting ½"	15000	200	300	200	2.50
12.	Screw-cap base mounting ¼"	12000	100	200	150	2.00

* Note: Basis: $P_n = \frac{(S-A)A^n}{S^{n+1}}$ (Queuing Theory)
where Pn is the probability that there are n units awaiting processing; A is the number of units arriving per minute; S the number processed per minute.

Table III

POTENTIAL PROFIT ON ITEMS WITH MAXIMUM PROFIT PER UNIT

Product No.	Production (units)	Production Hours			Profit per unit	Total Profit
		Fabricating	Assembly	Finishing		
1.	9000	600	1100	950	$7.50	$67,500
2.	10000	900	1300	1200	7.00	70,000
3.	13000	600	900	700	6.50	84,500
4.	11000	800	1500	1300	6.00	66,000
5.	10000	500	1000	900	5.50	55,000
6.	9600	400	480	400	5.00	48,000
Total	62,600	3,800	6,280	5,450	—	$391,000
Idle time		—	120	150		

Table IV

POTENTIAL PROFIT ON ITEMS WITH MAXIMUM DOLLAR VOLUME

Product No.	Production (units)	Production Hours			Profit per unit	Total Profit
		Fabricating	Assembly	Finishing		
3.	13000	600	900	700	$6.50	$84,500
2.	10000	900	1300	1200	7.00	70,000
1.	9000	600	1000	900	7.50	67,500
4.	11000	800	1500	1300	6.00	66,000
7.	20000	600	1000	800	4.25	85,000
8.	13500	300	600	600	4.00	54,000
Total	76,500	3,800	6,300	5,500	—	$427,000
Idle Time		—	100	100		

Table V

POTENTIAL PROFIT—IMPROVED USAGE OF PRODUCTIVE CAPACITY

Product No.	Production (units)	Production Hours			Profit per unit	Total Profit
		Fabricating	Assembly	Finishing		
1.	7500	500	900	800	7.50	$56,250
3.	13000	600	900	700	6.50	84,500
5.	10000	500	1000	900	5.50	55,000
6.	12000	500	600	500	5.00	60,000
7.	20000	600	1000	800	4.25	85,000
8.	18000	400	800	800	4.00	72,000
9.	10000	200	400	350	4.00	40,000
10.	15000	200	300	400	3.00	45,000
11.	15000	200	300	200	2.50	37,500
12.	12000	100	200	150	2.00	24,000
Total	132,500	3,800	6,400	5,600	—	$559,250

Comparison of simply prepared tables will make most profitable production schedule possible

may smile at this use of the word "artistic," but there is a definite kinship between the ability to look at a set of (necessarily incomplete) facts and deduce what should be the correct action to cope with future changes, perhaps in defiance of apparent trends—and the ability of the artist to look below the surface and see meanings not apparent to the casual observer.

The methods are available now, by which many descisions that have traditionally had to be taken in this way, can be based on scientific predictions within known limits of accuracy. The decisions will still have to be taken, but much of the nervous strain can be taken out of the decision-making process; and if nervous strain seems a fancy expression—who, by popular tradition, has the ulcers—the manager or the scientist? If decisions can be taken on the basis of scientific calculations by proven methods, there will be no need to wait anxiously to see how they work out. They will work out, as expected, within the limits accepted in advance. Obviously this cannot apply to all decisions: in many cases the limits of accuracy will be too wide for comfort. But it can apply in many cases commonly met, and the horizons are being extended daily.

What cases are we talking about, then?

Let us take two or three examples; for instance—the eternal pull between Sales, wanting a diversity of models to meet customers' varying demands, and Production, wanting long straight production runs; or, on a lower policy level, the relation of production requirements to purchasing policy; or the probable effect of a variety of external factors on the company's sales.

Here it should be repeated that the examples we use are hypothetical—because real-life examples are usually too complex—but the principles hold good, and are being used and very profitably used, too.

Let us take, then, a firm with twelve products. Government, trade association, Chamber of Commerce and other statistics show that the market, to be shared between the competing manufacturers of these products, is of a certain size: so many million dollars.

The Sales Department—or Market Research, or whatever other department of the company is responsible for this type of study—forecasts that the company can capture a certain share of the market for each of the products, with or without various modifications. In this connection, a modified product can be considered as a separate product.

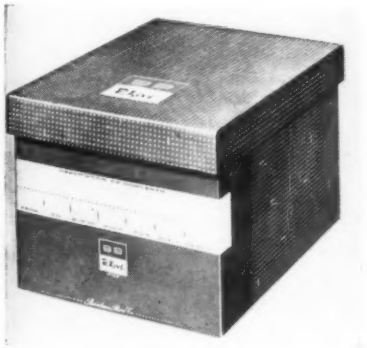
Each product has to be processed through various stages of production and the capacity at each stage is de-

(*To page* 78)

New for the office

◀ Ball-point pen
The Autopoint "3X" ball-point pen features a visible ink barrel, "magic float" ink flow and "Spin-tip" pocket protector. Available in a wide variety of colors at 49 cents each, the pen is a product of the Autopoint Co., Div. of Cory Corp., 3200 Peterson, Chicago. **(A-2)**

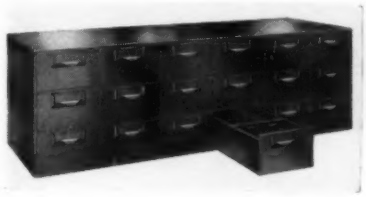
▲ Hot water unit
The McIntire Co., Livingston, N. J., announces the "Add-on" Hot Water Dispenser to convert pressure-type coolers into combination cold-hot water units. The packaged assembly lists at $49.50 and delivers up to 80 cups of hot water an hour at a temperature of from 195 to 200 degrees Fahrenheit. **(A-3)**

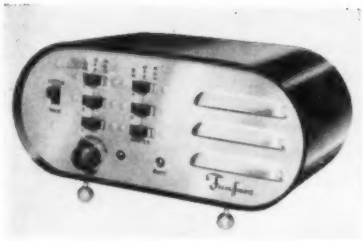


▲ Quick-reference storage file
The "R-Kive File" combines two files in one and may be used to file either letter- or legal-sized records. Measuring 12 inches wide, 15 inches long and 10 inches deep, the file is portable and includes "tote" openings in front and back. It is manufactured by Bankers Box Co., 2607 N. 25th Ave., Franklin Park, Ill. **(A-1)**

▲ Speed scale
A "promidized" lever system and aluminum anodized base and tower are features of the new 1C-73-05 Speed Scale from Detecto Scales, Inc., 540 Park Ave., Brooklyn 5, N. Y. Cone-shaped bearings in the oscillator reduce friction possibilities. **(A-4)**

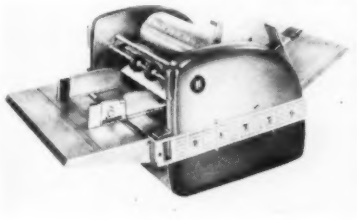
▼ Drawer case unit
Lyon Metal Products, Inc., Aurora, Ill., announces a new steel drawer case unit for storing a variety of small items. Available in 12, 18, and 24 in. drawer models, all fit standard 36 in. wide shelving openings; the 18 and 24 drawer units come in two sizes, the 12 drawer unit in one size. **(A-5)**





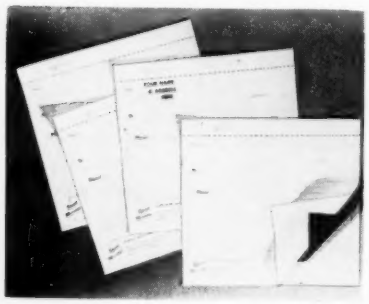
▲ Intercom system
The "Monitor," Model FM-6, may be used in conjunction with up to 5 remote stations. Features include two pilot lights, satin-copper front panel, and choice of several decorator colors. It is available from Fanon Electric Co., 98 Berriman St., Brooklyn, N. Y.; list price—$37.50 for master control unit and $13.25 for each remote. **(A-6)**

▽ Office duplicator
Longer, lower and wider than its predecessors, this duplicator offers a new 18-inch drum width, push-button intermittent paper feed and fully-adjustable feeding and receiving trays. One in the D-70 line of Direct (liquid or spirit) Process machines, the duplicator is a product of Ditto, Inc., 6800 McCormick Rd., Chicago 45. **(A-7)**

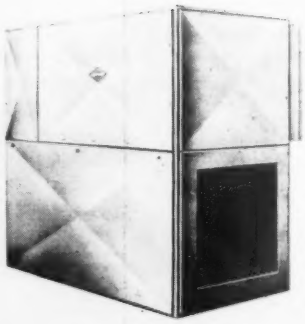


▲ Elevator file
This new "46" motorized Super Elevator file is capable of holding about 125,000 5 x 3 records, requires less than 17 square feet of floor space, and offers push button filing for mass record handling. A "smaller version" of the "63" Elevator file, it is manufactured by Diebold, Inc., Canton, Ohio. **(B-1)**

▼ "Speed Message" form
This form is a two-part carbon-interleaved, stub-style set, 8½ x 7 in. when detached, designed to dispatch short notes, instructions, questions and memos where an answer is not necessarily required or implied. The product is available from Carteret Printing Co., 480 Canal St., New York 13. **(B-2)**

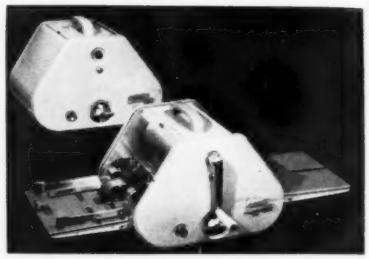


▼ Tape supply reel
This unwinding device is capable of handling 5-, 6-, 7- or 8-channel tape, and will feed accumulated rolls to any input from the original starting point, without rewind, in any direction. Designed with an integral tape guide, the unwinder is from Whiteford Laboratory, 420 Market St., San Francisco 11, Calif. **(B-3)**

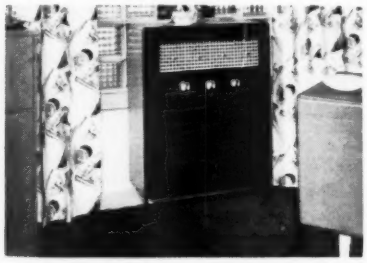


▲ "Packaged" air conditioner
Key feature of the firm's line of packaged, self-contained air conditioning equipment is sectional construction, which permits remote location of condenser section, if space is limited. This D-H SCR line of water-cooled air conditioners is the first product in the recent expansion program of Drayer-Hanson, 3301 Medford St., Los Angeles 63. **(B-4)**

◀ Punched tape typewriter
New electronic punched tape typewriter may be used to translate data into punched tape, or, when tape-fed, to read and type out such data at a rate of 120 words a minute. It is available from Remington Rand, Div. of Sperry Rand Corp., 315 Fourth Ave., New York 10. **(B-5)**

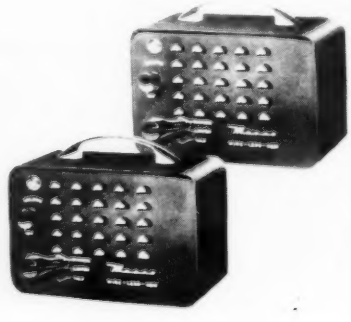


▲ Duplicator
The "Fordigraph 100" duplicating machine features roller moistening, finger tip fluid control, self-aligning impression roller, re-settable copy counter, and paper guides. Priced at $149, the machine is distributed by Rex-Rotary Distributing Corp., 387 Fourth Ave., New York 16. **(B-6)**



▲ Air conditioning equipment
New line of water-cooled room air conditioners, to replace the firm's previous line of water-cooled console models, includes this model with a front of imported Honduras mahogany. It is a product of Remington (Air Conditioning Div.) Corp., Auburn, N. Y. **(B-7)**

▼ Two-station intercom unit
New plug-in, wireless two-station Masco intercom, housed in metal cabinets, is styled in modern charcoal grey and is provided with handles for room-to-room portability. Listed at $49.95, the Wire-Less-Com is a product of Mark Simpson Mfg. Co., Inc., 32-28 49th St., Long Island City 3, N. Y. **(B-8)**

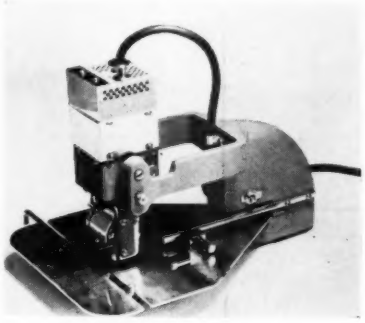


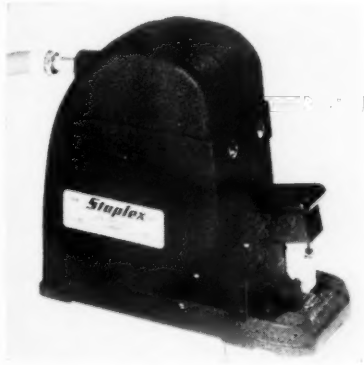
▲ Book photocopy machine
This Copease "Duplex Book Copier" combines an exposer and printer in a single unit, and features a sponge-rubber cushioned head and an automatic timer. The unit, with built-in positive and negative dispenser, is designed for copy work up to 8½ by 14 in. in size. It is distributed by Copease Corp., 425 Park Ave., New York 22. **(C-1)**

▼ Open shelf file doors
All models of "Verti-File," an open-shelf filing unit from Deluxe Metal Furniture Co., Warren, Pa., now are available with slide-away doors. From one to seven doors per section may be ordered, with or without locks, and units are designed to allow for the addition of doors to existing sections. **(C-2)**

If further information is desired, use Reader Inquiry Card on page 92.

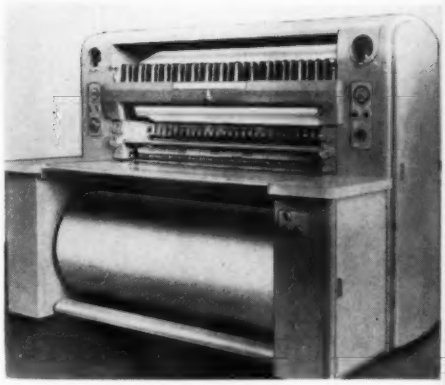
▼ Numbering Machine
This electric numbering machine automatically prints numbers from 1 to 999,999 with instant choice of consecutive, duplicate or repeat operation. Designed for use with cards, tags, labels and carbon forms, and with choice of hand or foot operaton, the machine is a product of Roberts Numbering Machine, Div. of Heller Roberts Mfg. Corp., 700 Jamaica Ave., Brooklyn 8, N. Y. **(C-3)**





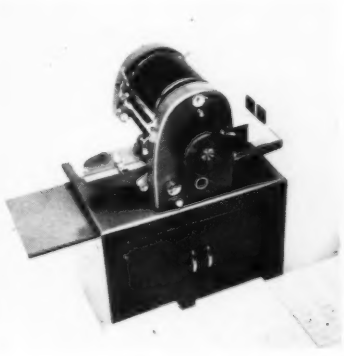
▲ Air-powered stapler
The Air-Stapler, known as Model SA-100, is equipped with a 3-way air switch valve for either foot, knee or hand operation. Dimensions are 7 x 3⅜ x 7; weight, 7 lbs. Complete for connecting to air line, it is priced at $49.50 from The Staplex Co., 777 Fifth Ave., Brooklyn 32, N. Y. **(C-4)**

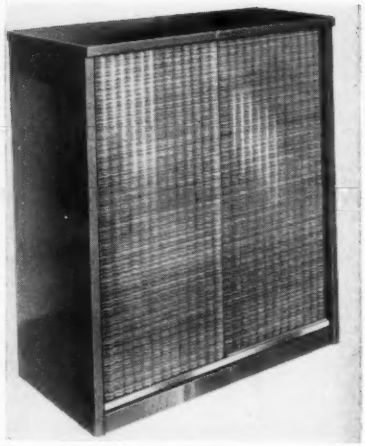
▶ Mimeograph
This electric (Model 438) mimeograph accommodates a full ream of paper and has a clock-type counter that rings a bell and shuts off the feed when the run is complete. It has a variable speed of from 90 to 180 copies a minute, and is manufactured by A. B. Dick Co., 5700 W. Touhy Ave., Chicago 31. **(C-5)**

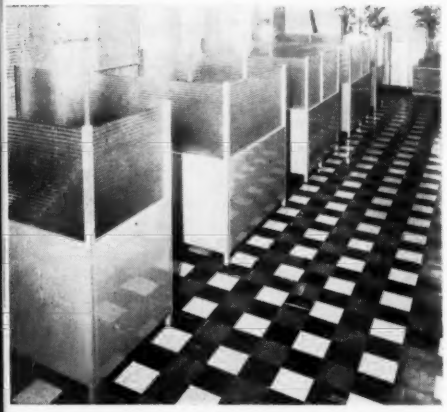


▲ Diazotype printer
This Tecnifax Hi-Q Diazoprocessor, according to the manufacturer, Tecnifax Corp., Holyoke, Mass., is an ammonia-developing diazotype printer with electronically-controlled speeds of up to 125 ft. per minute, is designed to meet requirements of high-volume users of diazoprints ("whiteprints"). It produces prints from translucent masters up to 54 in. in width. **(C-6)**

▲ Telephone list finder
The Pencilist, equipped with its own pencil, has spaces for 1300 names and phone numbers. Available in five colors, the list finder is priced at $1.95 and is manufactured by The Bates Mfg. Co., Orange, N. J. **(C-7)**







▲ Modular steel desk
Featuring interchangeable tops, panels and pedestals for purposes of regrouping to meet changing office needs, this modular desk is made of heavy gauge steel and is available in a variety of sizes, types and shapes. Lettersized drawers glide on ball bearing, full-suspension arms. It is a product of Cole Steel Equipment Co., Inc., 415 Madison Ave., New York. **(D-2)**

▼ Adjustable stand
This AC 100 Combination Arts & Crafts table may be used to support duplicators and various office machines. Overall size is 24 x 40 x 30 in., and it is available from Garrett Tubular Products, Inc., P. O. Box 237, Garrett, Ind., with either maple or plastic tops and a choice of five colors. **(D-3)**

▲ Office cabinet
The Borroughs Mfg. Co., 3002 N. Burdick, Kalamazoo, Mich., announces a new line of steel bookcases and supply cabinets termed the "Conversion Line." Measuring 29, 42, 78 and 84 in. in height, 36 in. in width, and 12 and 18 in. in depth, the cabinet features sliding shelves which are adjustable without bolts or clips. Open face units may be converted into sliding door cabinets with "Borite" (a composition of plastic and fiber glass) glass or steel doors. **(D-5)**

▲ Office dividers
Equipped with a new locking mechanism, featuring an adjustable coil spring of high-tension spring steel, this office divider is manufactured by General Steel Products Corp., 131-33 Avery Ave., Flushing, N. Y. A new sound-depressing device, termed the "Sound Trap Baffle," employs a honeycomb arrangement between the walls of each panel, thereby diminishing office noises within the enclosures. **(D-1)**

◁ Four letter-drawer desk
The Generalaire 1960F-4VL, from The General Fireproofing Co., Youngstown 1, Ohio, includes two two-letter drawer pedestals supported by legs. Inside height of each drawer is 10 11/64 in., with a depth of 26¼ in., and capacity of more than 100 in. of material. **(D-4)**

▲ Flexible shelving support
This new "wall-rung" system offers flexibility for installing, rearranging and removing shelving, display boards, blackboards, coat racks, lightweight desks and similar furnishings. Using vertical, slotted steel columns, installed at 36-in intervals along walls, standard bracket-equipped fixtures may be set in position as desired. The system is manufactured by W. R. Ames Co., 150 Hooper St., San Francisco 7. **(D-6)**

Even the wastebasket can go—there's one inside *this desk*

How to be a "*clean desk*" man

New "Clutter-Proof" Desk has ingenious ability to lend a hand to a man at his work

Take a good look around your office tomorrow and see all the clutter on top of desks. A lot of valuable *space and time are being lost* there.

These same desk workers could get more done if they sat at new Shaw-Walker "Clutter-Proof" Desks.

Fully 75% of the things that drift around on other desks have a *specific place inside* this desk.

In the *organized drawers* there are *off-the-desk* trays for incoming, outgoing and pending letters, *off-the-desk* space for work organizers, work separators, deferred projects, tickler, binders, books, pads, forms, card lists. And imagine this—there's even an *in-drawer* wastebasket and *in-drawer* phone!

With a Shaw-Walker "Clutter-Proof" Desk *usable working space on the desk is actually doubled.*

See these new "Clutter-Proof" Desks at our branch or dealer store, or write Shaw-Walker, Muskegon 79, Mich. for our 252-page Office Guide.

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SHAW-WALKER

Largest Exclusive Makers of Office Equipment
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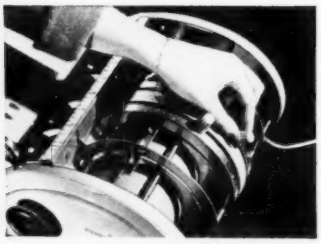
Ever figure the cost of hand folding? Wow!

Folding a few hundred bulletins, form letters, statements, envelope enclosures, may not seem like much—but check the time it takes, and you may be surprised!

Hand folding is slow and tedious—a job nobody likes. It diverts your girls from more productive work. And it's unnecessary—thanks to the Pitney-Bowes Model FH!

Designed for the small office, it's simple, light, portable, can be used by anybody. You set it by moving two knobs, easy as tuning in a TV set. *And it costs less than a typewriter!* With semi-automatic feed, the FH can double-fold 8½ by 11 sheets at 80 per minute. Automatic feed, available at slight extra cost, gives it even higher speeds.

This folder costs less than a typewriter!



Move two knobs on inch scales to fold widths wanted—and the FH is ready to go!

The FH can make eight different folds, handles sizes from 3 by 3 up to 8½ by 14 inches, and paper of most all standard weights and finishes. It can also fold stapled sheets.

With only occasional use, the FH soon pays for itself. Ask the nearest PB office for a demonstration. Or send coupon for free booklet.

The larger Model FM, fully automatic, folds up to 19,000 sheets an hour.

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Originators of the Postage Meter . . . 102 branch offices, 297 service points in U.S. and Canada.

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Firm_____

Address_____

Books and Pamphlets

(*From page* 14)

Co., Inc., 300 W. 42nd St., New York 36.

Plant Location, by Leonard C. Yaseen. Including maps, charts and tables, this book presents a practical guide to scientific plant location. Such important factors as complex transportation systems; competitive advantages in raw materials sources and markets; labor availability, costs and stability; power, fuel and water supplies and waste disposal, taxes and labor laws of various localities; climate and resulting heating costs, and analyses of communities are considered in detail. Author Yaseen is senior partner of Fantus Factory Locating Service and has served as plant location consultant to more than 1500 concerns. Price, $10; American Research Council, Inc., 11 E. 44th St., New York 17.

Supervisory and Executive Development (A Manual for Role Playing), by Norman R. F. Maier, Allen R. Solem and Ayesha A. Maier. In this 330-page book the authors treat human relations training and executive development from the standpoint of skill in practice, rather than list accepted principles of behavior. Industrial conflicts are presented in the "role-playing" format; and the volume extends itself into a casebook in human relations. About half the cases illustrate principles in management leadership, conference skills, methods of recognizing and dealing with feelings and emotions, and problems in group settings. The other half illustrates principles of effective relations and mutual understandings between individuals. Price, $6.50; John Wiley & Sons, Inc., 440 Fourth Avenue, New York 16.

Management Guide to Overseas Management Guide to Overseas at Its Opportunities and Responsibilities, edited by Dan H. Fenn, Jr. Reflecting widening interest in foreign trade, its problems, possibilities and techniques, this new text is based on proceedings of the 26th Annual National Business Conference of the Harvard Graduate School of Business Administration. A large number of case histories from a variety of companies is offered as practical guidance

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HALF SPACING

Easiest method of error control, *Half Spacing* is but one of a host of Smith-Corona exclusives that mean faster, *finer* typing. Other Smith-Corona exclusives:

Page Gage—amazing device that eliminates the usual worry about end-of-page typing.

Keyboard Control—*all* operating controls concentrated in the keyboard area.

Plus: Air cushioned carriage return, four automatic repeat actions.

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Now!

a simple multiplying 10-key listing machine

Comptometer Comptograph "220M"

6 new features make figuring easier...

NEW Multiplication Key – electric short cut multiplication . . . even prints both factors and answer on two easy-to-read lines.

NEW High Speed – 220 cycles per minute. Over 30% faster than most other 10-key listing machines.

NEW Dual-Purpose Lever – converts from multiplying to straight adding. 11-digit listing – 13 totaling capacity.

NEW Color – smart "Autumn Tan." Easy on the eyes – blends with modern office decor.

NEW Variable Space Control – adjusts for single or double spacing.

NEW More Flexible Keyboard – accepts new figures faster.

Plus these wanted features – Exclusive Automatic Visi-Balance Window – Single Cycle Keys – Portability – Two Color Printing – Quiet Rotary Action – Streamlined Styling – Concealed Paper Roll.

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figures faster than you think

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to the executive contemplating international markets for his company. Personnel management, control, public relations, labor relations, the establishment of manufacturing facilities, and many other topics are included, each of which emphasizes high points in the thinking of the more than 1000 business leaders who took part in the conference. McGraw-Hill, 330 W. 42nd St., New York 36; price, $4.50.

Successful Executive Action, by Edward C. Schleh. Covering 40 of the most effective methods which 50 blue-chip managements have devised to increase company profits, Author Schleh points up means by which these successful companies have maintained their earning records or, in many instances, bettered them. Worksheets are provided to enable readers to check how their own companies measure up against these successful managements in each of the main areas that determine profitable operation. Parker Publishing Co., Englewood Cliffs, N. J.; price, $10.

People in the News

Harold Patterson, E. E. Connelly, J. T. Moore, and *C. L. Riggs* have been named to the staff of *R. L. Forsberg,* comptroller, Airtemp Div., Chrysler Corp.

Henry Keyserling and *John F. McCabe, Jr.,* have been elected partners in Cresap, McCormick and Paget, management consulting firm.

Carl S. Saltzman has been named vice president of Automation Consultants, Inc., New York.

John W. Wibel, formerly vice president and secretary of The Gray Mfg. Co., New York, has been elected president. *John F. McGovern,* former comptroller, has been named vice president and treasurer. *Lewis W. McKinney* was elected vice president and secretary.

John H. Stoutenberg has been named director of office systems and procedures for The Stanley Works, New Britain, Conn.

Donald C. Lum, personnel manager at the Brooklyn headquarters and plant of Chas. Pfizer & Co., Inc., has been named director of employee rela-

(*To page* 65)

These are the advantages of

SMEAD'S CARD CONTROL

FILING SYSTEM

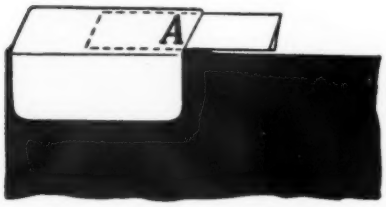
SIMPLICITY
SPEED
ACCURACY
FLEXIBILITY
EXPANSION
LONG LIFE

This Card Control Index tab arrangement is of particular value for *small installations* where only the primary subdivision is used, with space reserved in the two positions at the right for further breakdown as future growth may require. It is also ideal for *large installations* where many of the cards will fall in name, subject or geographical groups.

Scientifically correct alphabetical primary index (yellow tabs) in three positions at the left to provide practical distribution of contents.

Indexing space at right used for expansion by common names of persons or firms . . . special names . . . more active subjects or geographical subdivisions.

The Operation is Simple, Automatic, and easy to Maintain



GUIDES OF BLACK PRESSBOARD WITH SMEAD'S NEW FLAT-ANGLED INSERTABLE CELLULOID TAB

No protruding edges under which cards can catch—yet angled and with full 3/8" exposure for perfect visibility of indexing.

Supplied in units—each consisting of the correct size primary index, the correct quantity of common name and initial guides and the necessary printed common name and initial inserts, to index any specific quantity of cards. Available in all standard card sizes.

When your Smead dealer knows the approximate number of cards you want to index he will furnish you with specific information as to the size unit necessary to meet your needs.

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Smead Manufacturing Company, Inc.
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Gentlemen:

We plan to index approximately_____cards. Please send full information or advise us of our nearest Smead dealer.

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City_____ Zone_____ State_____

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WHETHER YOU FILE . . . . Alphabetically, Numerically, Geographically, Chronogically, or by Subject Indexing, THERE IS A SMEAD SYSTEM ALREADY TAILORED TO FIT YOUR NEED. See your stationer. He will be happy to discuss your problems with you.

SMEAD TELL-I-VISION INDEX

By using Smead's Tell-I-Vision filing system, you can reduce filing time. The alphabetical-color signal system for finding—and the numerical-color signal system for replacing—make filing easy, fast, and accurate.

SMEAD'S TWO-PLI-TOP FILE FOLDER

Made doubly thick at the points of greatest wear. Ask for sample.

SMEAD'S TELL-I-VISION

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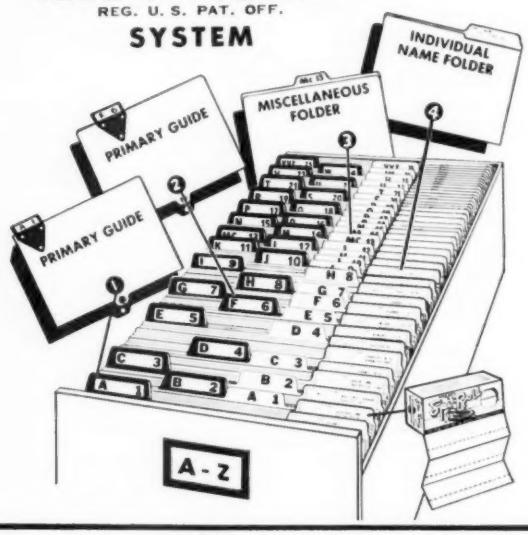
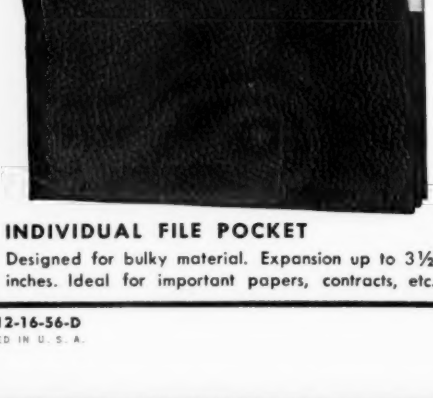
SYSTEM



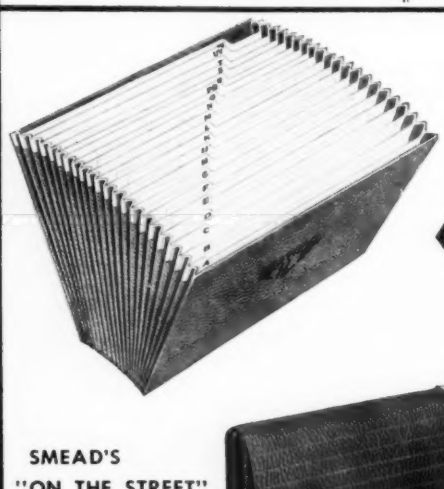
SMEAD'S PROPOSAL COVERS are furnished in many colors and finishes. Also available with open window.

SMEAD'S DESK FILE which is really a correspondence sorter. Available in printed or celluloid tabs.



INDIVIDUAL FILE POCKET

Designed for bulky material. Expansion up to 3½ inches. Ideal for important papers, contracts, etc.



SMEAD'S EXPANDING FILES

Made of leather-like material—long wearing—soil resistant. Made in many sizes with or without flap

SMEAD'S "ON THE STREET" CARRYING CASE

Perfect for carrying papers in all types of weather. Sheds water—glove-fitted whether partially or fully expanded. Furnished in four sizes.

Write us for samples and further information

SMEAD MANUFACTURING COMPANY, INC.
Hastings, Minnesota, U.S.A.

No. 12-16-56-D
PRINTED IN U. S. A.

Procedures—

(*From page 27*)

cedures writing. If a standard format is established, and the symbols are explained, then all the prospective flow-chartist needs is a supply of blank flow-chart forms.

Should it become obvious that the procedure requires some degree of mechanization, the department then turns either to the procedures man for suggestions as to different types of suitable mechanized equipment, or else he goes directly to the equipment manufacturer's representatives for ideas. Often, this will stimulate some machine applications that the systems and procedures man had not been aware of prior to that moment.

From that point the different methods available for mechanizing the process are studied and a decision arrived at as to which best fits the need of that particular operation.

Plan usable company-wide

This entire plan of decentralized procedure writing is perfectly suitable for projection on a broader basis, company-wide. Then, each division handles its own procedures along *corporate* format lines, and in turn forwards the finished version to the central procedures staff at corporate headquarters. The corporate staff's job in this respect would be primarily one of checking for conformance to corporate policies and procedures. It would also maintain a central file of *all* divisional procedures cross indexed, for purposes of assisting the divisions in individual cases, by suggesting that they follow a procedure already established in another division. The principal function of the Corporate Department would be to handle Corporate Standard Procedures in the same manner advocated above, but on a larger scale. Obviously, it would be most logical for them to establish the formats for the procedures, flow-charts and forms used in these efforts, in the interest of uniformity.

If this method seems like a shotgun approach to procedures writing, it should be remembered that it overcomes one of the most irritating faults of a fully centralized procedures setup. Under the old method, it often takes so long for a procedure to be written, it may well be obsolete within a few weeks after it is issued. Besides, in most companies today, *speed* is essential. Every day that passes in a department *without* a standard procedure for its operations, is a day where the possibility of mistakes, slipshod handling, lack of training data and outright waste of money through fumbling operations can result in thousands of dollars being virtually thrown out the window.

Why should large portions of the company be penalized for the sake of others, merely because the procedures department has only five men in it, where *fifty* are needed? The fact is, fifty procedures writers *do* exist in that company. It is up to management to utilize them to the fullest.

This can best be done under a decentralized procedures program.

Machine selection—

(*From page 32*)

of machine is 15 percent or 25 percent faster than another would not show up. Remember, you are *comparing*.

With the various types of duplicating machines and with printing and tabulating machines the amount of paper and forms used and their cost is often a factor that varies between machines.

Get firm quotations on this paper in the volume the system would use. If you commonly order a six-month supply, use the quantity price for the six-month usage. Then from this figure find the cost per year of paper for each machine.

Remember the cost of test and run-down sheets, paper wasted in getting good copies, and the cost of masters (for duplicating machines).

If supplies are worth considering, get the best figures available, on a per-thousand-sets (or copies, or jobs) basis. But if typewriter ribbons, for instance, cost only $10 for a year's supply, leave them out as inconsequential.

Remember the cost of chemicals, lamps, hand-cleaner (for spirit duplicators), and expendable items such as blankets and molleton covers (for offset duplicators), and plates (for addressing machines).

Only on equipment which generally requires a considerable amount of service and repairs is it necessary to measure these factors.

Experience of other companies or past experience in your own company can be invaluable in estimating potential annual cost. Figures from the equipment salesman are sometimes valid.

Some vendors offer service agreements, at a set rate per year. If they are desirable in the particular instance, use the annual fee. If parts are extra be sure to allow for them. But if only one company offers a service agreement, make this comparison from estimates of actual non-service-agreement costs, leaving the availability of such an agreement to the later part of the study.

If one brand of machine takes much more space than another, or if space is an important factor (as with tabulating equipment), include it in the study.

Include not only the space required by the equipment itself, but also space for the working area around it. If part of the working area is shared with other functions, cost that portion at half-price.

Use a square-foot-per-year figure which your cost accounting or plant layout people may be able to provide. A cost of $1.00 to $1.50 for heated space is common for most areas.

How to handle installation cost

Installation cost is usually a one-time factor and not an important percentage of total cost. If it is sizable, divide the full cost by an amortization figure reflecting equipment life (5-10 years); or capital asset life (10-25 years) for walls, plumbing, electrical wiring, air-conditioning, etc.

If you use installation cost for the proposed equipment, point out that it weights the cost unfavorably, if present equipment required a similar cost to install.

When the comparative factors have been given a dollars-per-year value, summarize the savings in the manner shown in Figure 1, page 32.

A very important note: The costs derived in this way are effective only for a comparison. They (intentionally) leave out overhead, idle machine time, the cost of supervision, etc., which do not tell how much *more* one method costs than another.

The cost picture is half of the study. The rest is a simple listing of the facts which are not easily reducible to dollars. In this section point out, by machine, the comparative advantages and drawbacks; such as "Does not reproduce blue copy," "Process is dirty for operators," "Machine requires too

much skill for use by general office personnel," "Quality is highest of machines studied," etc.

List here also the advantages (with costs) which special attachments can produce; as "Reproduces book pages with exposure box ($100)," "Listing attachment ($275) permits selective listing of names on a single page," or "A double-sheet eliminator is available for $178."

Show also those dollar factors which are too difficult to determine without actual experience. "By making reduced-size prints, a saving of about 25 percent of filing space is possible after full conversion of the system, with a consequent saving in high-priced special filing equipment." "By eliminating the sorting step through preliminary machine sorting, reports can be distributed half a day sooner."

When any of the competitive machines would produce an advantage over the machines in use in the system now, state this comparison here. This section can include pure systems savings—savings from eliminating check points, from combining the functions of two pieces of paper, from improving forms design, from relocating a certain operator, from speeding the process.

Make recommendations positive

When both tangible and intangible facts of the comparison are down on paper, summarize and recommend. Be bold enough to begin this section with "I recommend. . . ." State concisely which machine you feel is best for the application, what the dollar savings (if any) are, and what the basic improvements and advantages are.

Perhaps you will begin with the cost-per-copy figure: "Sets run by Machine B cost 4.35c each, as against 4.95c for Machine A." Then, "For the yearly quantity this system uses, Machine B would save $311.67 in out-of-pocket dollars." If you are recommending Machine B, you will then summarize the variable and intangible reasons to back it up.

But if Machine A is your choice, you may add, "But despite this dollar saving, the sharpness of copy which Machine A produces is substantially better for this engineering drawing application, and worth much more than its $311.67 extra cost."

The summary must, above all else, be brief, to the point, and convincing. Let the rest of the study furnish the detail to back up the summary.

When all sections of the report are complete, rearrange them for the best presentation. The summary, developed last, is usually most effective at the beginning of the report. Then a review of the problem, with perhaps the content of "General Advantages" next. Then dollar costs, then intangibles. If your dollar comparison has covered more than one possible usage per year, say 10M, 50M, and 100M, a simple line graph of costs of the present method versus the competitive machine methods can follow the report.

At this point, if you want to add a final touch of conviction to your report, call in each of the competing salesmen (separately, of course) and go over the rough draft with them. They may help you correct some details or some interpretations with better facts.

This is a basic, clear way to evaluate competitive equipment. Each person who uses it will make his own variations, and each time it is used it will take a different shape according to the nature of the study. But with this factual study not only you, but those in the company who must be sold, and the competitive salesmen as well, will recognize the pattern of thinking and accept the recommendation as factual and fair.

Forms—

(*From page* 25)

changes in the sequence of the items. If possible, try to arrange the length of each box so that it begins and ends at the same point as the box above it. This will improve the forms appearance and may permit the typist to use her tabulator more frequently. You will also vary box length so that the left and right margins are even. Never, however, risk cramping a possible entry in order to get a symmetrical form. Appearance is important but is always secondary to use.

Try two or three drafts before attempting a final one. Your first one may be freehand, the next ones should be on proper size paper using rulers and spacing guide. When you have a satisfactory design, check once more with the users to make certain it is usable before drawing the final draft.

A useful trick— and one that many expert designers could well adopt—is to prepare your final draft in several copies. Take a sheet of good bond and three or four sheets of tissue (second sheet paper) the size of the proper form. With the bond on top and carbon paper interleaved, pin the stack to a drawing board or an old desk top. Or fix them by the margin on a clip board. Make sure your pencil points are sharp. Draw in the margin lightly in blue pencil. Draw in all lines, precisely spaced, using a hard lead pencil and firm stroke. Insert the stack of sheets into the typewriter with the smallest available type. Type in the captions. Column headings should be centered both vertically and horizontally. Box captions should be just a hair line under the top line and flush with the left end of the box. Distribute the carbon copies to the people who will fill in the forms and process these copies just as you plan to use the final form.

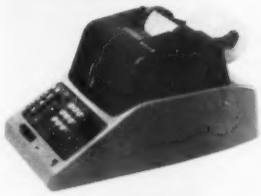
Preparing master for duplication

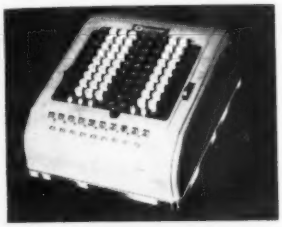
If the forms work out, you are ready to prepare the duplicating master and run off the form. Lines on the duplicating master should be traced from the bond sheet final draft. For stencil duplication, the lines on the draft should be gone over in red pencil for greater visibility. Insert the draft under the stencil, fold back the backing sheet and place the stencil on an illuminated glass drawing board or tape it to a window. The red lines will show through clearly. For spirit or gelatin duplicators, the master may be prepared the same way or by using stencil carbon paper.

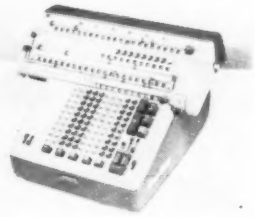
If these simple guides are applied carefully, they will produce attractive and efficient forms at a low cost which are adequate for most forms required in a small office or small work group in a larger office. If you are like most people, you will find after some experience with such simple forms design that you are developing increasing proficiency. Before you decide to design special purpose or other more complicated forms, or forms where considerable costs in use and duplication are involved, it would be best to do a little advanced studying. An excellent, comprehensive but simple discussion of both forms analysis and forms design is the United States Bureau of the Budget Management Bulletin "Simplifying Procedures Through Forms Control," June 1948.

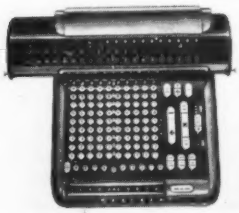
It may be purchased for a nominal fee from the Superintendent of Docu-

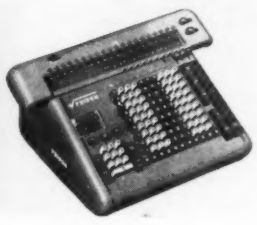
(*To page* 65)











A Monthly Feature

Tools of the Office

Adding, Calculating, Bookkeeping, and Accounting Machines, Systems and Devices; Machine Work Station Equipment

by Robert Beeman

IN THE DAY of the automatic office —whenever that may be—what will be the place of the simple adding machine? For that matter, what will be the place of the accounting machine, or—at a lesser level—the pad and pencil?

Actually, their chances for survival seem to be very good. There appears to be no likelihood that these familiar items will be superseded any time soon, if at all.

Developments in the office work today seem to be following three principal courses. There is, first of all, an unmistakable trend toward increased mechanization in general. (The word is used broadly to include electronic equipment.)

Second, because it is necessary as a means toward the first, there is increased study of office work to determine what parts of it are routine and repetitive (and suitable for machine handling), and what parts are exceptional and less frequently recurring (and must be reserved for human processing).

Third, perhaps the most important, is the growing awareness that it is not machines in themselves which are important, but the system through which the work is performed. What this brings finally is the recognition that office efficiency must be achieved on an individual—a custom-made—basis.

In all three of these trends, standard office equipment has a part.

The trend to increased mechanization has been most spectacularly advanced by the development of large electronic computer systems. However, it is perfectly clear that the tremendous data processing capacities of these systems are far beyond the needs of any but the largest companies.

The manufacturers of electronic equipment, therefore, have been working on smaller computers, and a number of these are now available. Nevertheless, even the smallest electronic computer has an enormous appetite for data, as compared to the needs of small companies. There are, moreover, a number of experts who feel that present-day small electronic computers are better adapted for scientific or engineering work than they are for bulk data processing.

But the development of the giant computer has had a stimulating effect on office planners. Even if the electronic monster is not for the average office executive, it has at least got him to thinking about the whole subject of mechanization.

As a result, he has begun to think more seriously about mechanizing work that has not been mechanized before—or to increase the degree of

Modern adding and calculating machines are offered in a variety of designs and capacities and have many interesting features. Here are seven representative models. From top to bottom: A ten-key R. C. Allen adding machine with "memory" and recall keys. Olivetti's Divisumma 24 calculator, with rotary printing, automatic constant, and "memory" features. An electric Comptometer, of the full-keyboard type. A Swedish-made Facit calculator, with ten-key keyboard and dials for presentation of results. Monroe's Monro-Matic Duplex, which can add or subtract while multiplying or dividing. Marchant's Deci-Magic electric calculator, which features automatic positioning of decimal points. The Friden Square Root Calculator, which, in addition to customary calculating, can extract square roots at the touch of one key.

mechanization where some form of it is already present.

The electronic data processing system has tended to take over work that was previously accomplished by elaborate punched card systems. It is probable that punched card systems will not again be as large as the largest ones of today, for when the volume of data to be handled reaches a point that would justify them, electronic systems will probably be preferable.

But smaller punched card installations have in turn tended to take on assignments that previously had been accomplished by lesser machines. They could have done so before, of course, but the office executive is now more aware than he was of what this equipment can do to speed his work.

Yet, even though standard accounting, bookkeeping, adding, and calculating machines are giving up some of their work load to punched card and electronic equipment, the loss is being made up from below. For the urge to mechanize has reached the smallest offices, and work previously done by hand is now being performed by machine.

In the rush to mechanize, there have been those who have bought machines first and then tried to fit their work to the machine. Rarely has this approach been successful. The machine is most effective in handling routine, repetitive work. The office function must therefore be studied first to see what parts of it can be reduced to routines so that the machine can perform a useful job. One cannot get very far along such an approach without realizing that efficiency depends on systematizing the work flow so that as much of it as possible can be made routine.

This means standardizing the work —the method, the source and form of data, the means of communicating it.

Since most offices are not large enough to justify large machine installations, it is necessary that the routinization of work be carried out with regard to the capacities of the less complicated machines available. Although it is folly to buy machines first and then try to make the work fit the machine, it is nevertheless necessary to understand what kinds of work can be expected from machines available and to find the best combination of working method and machine. The standard machines vary widely in their features and capacities. Their existence makes possible the development of many efficient systems; their variety permits the selection of systems most appropriate to the needs of each office.

It is, in fact, the appreciation that this choice is so wide which will lead to the maximum efficiency in the office. Today's office executive, confronted with a bewildering range of possible solutions to his problem, can only pick at random—and probably not too well—or else begin at the beginning and study his entire operation, with the goal of eliminating all possible wastes of time, effort, and material. If he does this intelligently, he will, of course, end up with a systematized office, and that system will be related to the office machines appropriate to the nature and volume of the work handled.

Machines best at routine work

It might seem, then, that the standard machines may tend to disappear in the larger offices. Actually, there are always—and probably always will be—office jobs large enough to make good use of equipment of any particular size—neither so small as to waste the capacity of the equipment, nor so large as to bottleneck in the machine department.

Moreover, the special province of the machine is routine work. Exceptions must be handled individually. While large computer installations can be programmed to take care of many exceptions without disrupting the work flow, whenever an exception beyond its capacity does occur, it must be handled by human agency. In many such cases, the less complicated adding or calculating machine may be an invaluable aid to the worker handling the exception.

The net effect of high-powered mechanization may, in fact, be to increase the variety of the jobs handled by the operator of standard machines, for these will tend to be used for exceptional cases which challenge individual judgment.

It may even be concluded that in smaller offices, where efficient mechanization may mean using nothing more elaborate than a ten-key adding machine, the use of pencil and pad may become a more exciting job than before, for it will be the monotonous, repetitive work that is consigned to the machine, while the more challenging work remains for non-mechanical devices which can be of great benefit in operations small enough to justify them. For example, it is not necessary to use a machine to compute payroll deductions. Under the proper circumstances, a set of charts or tables can serve as well. Nor is it necessary to use an expensive accounting machine to prepare the records required for a small payroll. One of the "one-writing" systems described in the list of manufacturers at the end of this section may be all that is necessary. Nor should one forget the power of the ordinary pencil.

In other words, there is a place for all kinds of solutions to office figuring and data handling problems. The advent of complex equipment has not replaced standard machines, except where standard machines were not really capable of doing the job at the speeds required. What has happened, instead, is that the variety of equipment has been made so vast that each office has a better chance than before of acquiring precisely the kind of equipment—whether large, medium-sized, or small—that it needs. And, in order to determine what its needs actually are, the office must necessarily turn to systems study.

Standard adding, calculating, bookkeeping, and accounting machines, nevertheless, are developing on their own. More and more they acquire new features that simplify their operation or increase their capacity.

There is little likelihood that the mechanical speed of this equipment can be increased appreciably. However, it is possible to accomplish more and more steps automatically on even quite small equipment. Most figuring, including multiplying and dividing, can be broken down into a form of addition or subtraction. What distinguishes the more complex machines from the smaller ones is the degree to which the necessary intermediate steps in the figuring operation can be accomplished automatically.

Thus, on a simple adding machine, multiplication may be performed by repeated addition. On a calculator, the multiplier may be entered on a separate keyboard, so that the operator has less work to do, and less opportunity to err.

Calculators can become quite complicated. Some are capable of extract-

ing square roots. Some can compute in the binary numbering system.

The factor that distinguishes bookkeeping and accounting machines from adding machines and calculators, essentially, is the ability to enter descriptive information. This may range from simple codes or date information to complete descriptions. An adding machine can be made to do some descriptive work by the use of the non-add key in connection with numerical codes. However, the descriptive facility is normally reserved for bookkeeping and accounting equipment. This capacity may range from a few simple keys to a complete typewriter keyboard.

Bookkeeping and accounting machines, moreover, often have more than one register in which to accumulate totals. The more registers, the more complicated the machine, of course, and the greater the variety of work it can do.

In deference to the age of integrated data processing, a number of otherwise standard machines has been equipped to produce a "common language" record of their operations. For example, an adding machine may produce a punched paper tape as a by-product of normal figuring. Or, a bookkeeping machine may be connected to a card punch. By such means, conventional equipment can be made part of large systems in which data can be recorded by one machine in a form to be processed automatically by another.

While this type of equipment is not described in the list of manufacturers which follows, occasional references are made to it. (This subject was covered in more detail in the July issue of *Office Management* in the review entitled *Equipment for "Automation in the Office."*)

The following lists cover manufacturers of adding and calculating machines, bookkeeping and accounting machines, "one-writing" and other bookkeeping and accounting systems, and certain charts, tables, scales, and miscellaneous devices which can be of use in bookkeeping and accounting work.

The Manufacturers

Adding and Calculating Machines

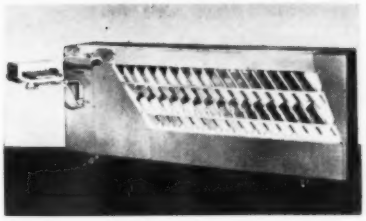
Addo-X, Inc., 300 *Park Ave., New York* 22. The Addo-X line includes four manual machines of the ten-key type at prices from $186 to $277 and ten electric models, also of the ten-key type, at prices from $314 to $1,374. The machines print out the results of calculation. Electric models have plus and minus repeat bars which, used with automatic step-over, facilitate multiplication.

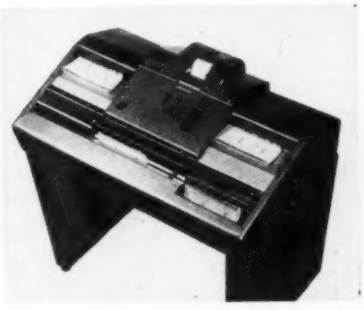
R. C. Allen Business Machines, Inc., 678 Front Ave., N. W., Grand Rapids 4, Mich. R. C. Allen offers a line that includes one manual ten-key printing adding machine, seven manual adding machines of the full-keyboard type, four electric ten-key models, and nine electric full-keyboard machines. Also available is a full-keyboard electric calculator. Ten-key machines feature memory and recall keys to make possible storing last item printed and recalling it when desired; credit balance; single, double, and triple ciphers; direct subtraction; and automatic step-over multiplication. Full-keyboard adding machines have credit balance, direct subtraction, automatic clear signal, and automatic space-up total. Price range: $109 to $545, plus Federal excise tax.

Alma Office Machine Corp., 34 E. 30 St., New York 16. This company offers the Everset line of Italian-made machines. They are adding one manual adding machine with a ten-key keyboard and an item counter and two electric ten-key models. No. M-53 has automatic step-over, automatic decimal positioning, and automatic credit balance. The Multirapid features fully automatic multiplication, with inputs made by the use of a dial much like that of a telephone. Results are printed on tape. Prices from $185 to $445. Also offered are two manual calculators with ten-key inputs, of the non-printing type. Prices: $230 and $250.

Barrett Adding Machine Div., Lanston Industries, Inc., 24th & Locust Sts., Philadelphia 3. The Barrett line includes two ten-key models, one manual and one electric, printing the results of computation on tape. Features available include automatic step-over to facilitate multiplication.

Burroughs Corp., 6071 Second Ave., Detroit 32. The Burroughs line includes the following: Five manual adding machines of the full-keyboard type. Ten electric printing adding ma-





Specialized equipment can be of great value in calculating and bookkeeping work. Here are several important types. *Top*: A Universal sorting machine, useful in sorting bookkeeping and accounting forms. *Second*: One of Denominator Co.'s denominating units for sorting and counting such items as sizes or styles of goods sold. *Third*: A Friden adding machine, the Add-Punch, which has been modified to record its work in punched paper tape, for subsequent automatic processing by other machines. *Bottom*: Royal McBee's new Keysort Tabulating Punch, for punching and figuring in connection with marginally-punched (needle-sorted) Keysort card systems.

chines with ten-key keyboards. Four electric full-keyboard Director adding machines, four multiple total electric Director machines. Price range: $126 to $675. Also offered is a line of calculators. Three are of the full-keyboard type, manually operated. Four, also of the full-keyboard type, are electric. Price range: $188 to $1,066.

Clary Corp., 408 *Junipero, San Gabriel, Calif.* The Clary line includes manual and electric machines. Some are of the ten-key type; others have full keyboards. Features available include direct subtraction, credit balance, thumb add bar for entry of whole numbers at one stroke, automatic step-over, and means for holding constants through a series of operations. Machines, including full-keyboard models, print results on tape. Some models have been adapted for use in integrated data processing. Among these are ten-key machines that punch paper tapes with codes of from five to eight channels as a by-product of normal operation.

Classic Calculators, Inc., 387 *Fourth Ave., New York* 16. The Classic line includes electric printing calculators with ten-key keyboards. One of these is of the duplex type—with two registers. A feature of the duplex model is short-cut multiplication in which the operation is printed in three lines, with a multiplication sign after the multiplicand, an equals sign after the multiplier, and the quotient on the third line. Results can be retained in memory for further use without reentering. Also offered is a grand totalizer feature.

Comptometer Corp., 1735 *N. Paulina St., Chicago* 22. (Formerly Felt & Tarrant Mfg. Co.) The Comptometer line includes a number of manual and electric adding machines and calculators. A line of full-keyboard models includes manual units in which the pressing of any number key applies its value immediately to totals appearing in the dials. Models are available with from five to twenty columns. A similar line of electrically powered models is also offered. Also available is a series of ten-key electric calculating-adding machines, printing results on tape, with credits printed automatically in red, facilities for retaining constant factors, and registers showing debit or credit balances at all times. The new Comptograph 220M is designed for multiplication, printing both factors and answer on two lines. It is priced at $440.

Facit, Inc., 404 *Fourth Ave., New York* 16. Two lines are offered: Odhner adding machines are available in one manual version, at a price of $169, and in five electric models, at prices from $285 to $385. These machines are of the ten-key printing type. Available features include direct subtraction, automatic credit balance, and automatic step-over. The Odhner XX-11C7 multiplier features short-cut multiplication with step-over; it is priced at $425. The Facit line of calculators includes two manual models at prices of $215 and $295, and two electric machines (one semi-automatic, the other fully automatic) at prices of $395 and $525. These are ten-key machines with results shown in dials. Odhner and Facit machines are manufactured in Sweden.

Felt & Tarrant Mfg. Co. SEE Comptometer Corp., the new name of this company.

Fremaco International, Inc., 188 *W. Randolph St., Chicago* 1. Fremaco offers two small Summira adding machines, manually operated, one showing results of computation in dials, the other equipped to print results on tape. Direct subtraction is a feature. These machines are light in weight (4½ and 8¼ lbs., respectively). Prices: $45.50, including F.E.T., and $79.95, plus $3.60 F.E.T.

Friden Calculating Machine Co., Inc., 2350 *Washington Ave., San Leandro, Calif.* Friden's extensive line includes the following: Two electric ten-key adding machines at prices from $335 to $390. One modified electric ten-key machine, the Add-Punch, for recording listed data in punched paper tape for later automatic handling in integrated data processing systems. This machine is priced at $1,500. Manual full-keyboard calculators, priced from $300 to $350. Six full-keyboard electric calculators at prices from $440 to $1,300. Features available include separate multiplying keyboard, automatic decimal point, and automatic carriage positioning. One machine is equipped to extract square roots automatically.

Johnston Adding Machine Co., 13343 *Sherman Way, North Hollywood, Calif.* Johnston markets a line of ten-key adding machines, both manual and electric. Features include direct subtraction, automatic credit balance in red, and automatic totals.

Lanston Industries, Inc. SEE: Barrett Adding Machine Div., Lanston Industries, Inc.

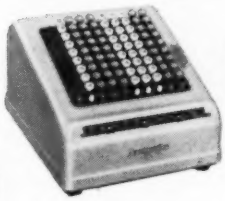
Lightning Adding Machine Sales Co., 2306 *W. Slauson Ave., Los Angeles* 43. The Lightning adding machine is a small portable stylus-operated model. Figures are entered, with the stylus, into dials somewhat resembling those of a telephone. The machine is priced at $14.95.

Marchant Calculators Inc., Oakland 8, *Calif.* The Marchant line includes eight full-keyboard electric calculators, priced from $440 to $2,950. Deci-Magic machines feature the completely automatic positioning of decimals and carriage dials. Twin-set Figurematic machines feature double entries in keyboard dials as a result of single entry in the keyboard; the design permits grand total accumulation and individual extensions to be registered simultaneously from single entries. Other Figuremaster and Figurematic machines vary in their special features. A special binary-octal calculator, which provides automatic binary-to-decimal and decimal-to-binary conversion, is designed to assist engineers in the programming of electronic calculators and other equipment using the binary numbering system.

Monroe Calcaulating Machine Co., Inc., 555 *Mitchell St., Orange, N. J.* Monroe's extensive line includes the following: One Monroe 500 manual ten-key printing adding machine, priced at $221. Six Monroe 300 manual full-keyboard adding machines, priced from $195 to $300. Seven Monroe 600 electric ten-key printing adding machines. Six Monroe 800, 43 Monroe 400, and ten Monroe 200 electric full-keyboard adding machines, at prices from $330 to $900. Adding machines are available with narrow and wide carriages and in models up to duplex register machines. Four L line manual full-keyboard calculators, at prices from $195 to $1,029. Calculators are rotary, crank-type machines

Readers wishing further information from manufacturers of products listed in the Tools of the Office section may use the Readers' Inquiry Coupon on the last page.

"I'm sick of this overtime on payrolls! Invoices! Statistical listings! Now if we only had Burroughs Calculators with those instant-action keys and those simplified keyboards... we could really go to town on high-volume figuring!"



There's a Burroughs Calculator just right for your high-volume figuring—electric or hand-operated. Demonstration? Call our nearest branch. Burroughs Corporation, Detroit 32, Michigan.

in semi-automatic and full automatic versions, as well as manual models. Monro-Matics, of the fully automatic type, feature single keyboard entry for all factors. Some machines automatically add as they multiply or divide, and store individual answers for use in subsequent computations. Synchro-Monroe adding machines can be used to punch paper tape with codes of from five to eight channels as a by-product of normal figuring; some machines can be used to punch standard punched cards.

The National Cash Register Co., Main & K Sts., Dayton 9, Ohio. NCR offers an extensive line that includes six manual full-keyboard adding machines at prices from $130 to $265 and 25 electric full-keyboard models. Included are grand total and selective total machines, together with special designs such as checkwriters and models with shuttle carriages. Electric machines are priced from $265 to $715. Some machines feature "live" keyboard, in which the amount keys serve as their own motor bars, to speed figuring. To accommodate standard machines for use in integrated data processing, some of the adding machines are wired for linkage with either a punched paper tape recorder or a card punch, for recording data in machine-sensible form as a by-product of standard computation.

Oerlikon Tool & Arms Corp. of America, Business Machines Div. SEE: Olkon Research Corp. of America.

Olivetti Corp. of America, 580 *Fifth Ave., New York* 36. The Olivetti line of Italian-made machines includes the following: The Summa 15, a manual, ten-key adding machine, printing results on tape; credit balances are printed automatically in red; price, $188, plus F.E.T. The Electrosumma 14 adding machine, an electrical version of the Summa 15, priced at $345, plus F.E.T. The Electrosumma Duplex 21, an electric adding machine of the ten-key variety with two registers that can be operated independently or together. The O.P.C. automatic printing calculator, a ten-key model with a separate multiplication keyboard, automatic credit balance, and other features, priced at $600, plus F.E.T. The Tetractys "superautomatic" two-register ten-key printing calculator, priced at $925, plus F.E.T. The Divisumma 24, a ten-key automatic calculator with rotary printing; automatic constant; memory feature; and fully automatic short-cut multiplication, both negative and positive. The Multisumma, a "popular-priced" automatic multiplier with automatic short-cut multiplication, separate multiplication keyboard, direct subtraction, automatic credit balance, etc.; price, $475. All machines print results on tape, and all except the Summa 15 have single, double, and triple cipher keys.

Olkon Research Corp. of America, P. O. Box 3049, *Asheville, N. C.* (Formerly Oerlikon Tool & Arms Corp. of America, Business Machines Div.) Olkon offers a line of adding machines that includes both manual and electric models with ten-key keyboards. The machines print results of computation on tape.

Plus Computing Machines, Inc., 5 *Beekman St., New York* 38. Plus manufactures a line of full-keyboard machines of both manual and electric types. Electric machines include simplex and duplex calculators. Features available include an additional memory register for automatic grand and net totals.

Regna Cash Registers Inc., 175 *Fifth Ave., New York* 10. Regna adding machines are of the full-keyboard type, with results printed on paper tape. Manual and electric models are available.

Remington Rand, Div. of Sperry Rand Corp., 315 *Fourth Ave., New York* 10. Remington Rand offers an extensive line of manual and electric adding and calculating equipment. The line includes a number of ten-key models, printing results on tape. Features available include short-cut multiplication, automatic division, and automatic credit balance printed in red.

Resulta Adding Machine Co., 110 *Glen Head Rd., Glen Head, L. I., N. Y.* Resulta has offered a line of small German-made adding machines priced about $50. Current details were not available at press time.

Readers wishing further information from manufacturers of products listed in the Tools of the Office section may use the Readers' Inquiry Coupon on the last page.

Smith-Corona Inc., 701 *E. Washington St., Syracuse* 1, *N. Y.* The Smith-Corona line includes three manual adding machines of the full-keyboard type. The machines, with adding/listing capacities of 6/7, 7/8, and 9/10 columns, are priced respectively at $99.50, $119.50, and $134.50.

Swift Business Machines Co., 51 *Church St., Great Barrington, Mass.* Swift offers a small manually operated adding machine with a ten-key keyboard. It is unusually compact and light in weight (less than seven pounds). Features include two-color ribbon and visible dials. It is priced about $100.

Underwood Corp., 1 *Park Ave., New York* 16. The list of Underwood machines includes the following: Three Underwood Sundstrand manual Trophy ten-key adding machines, printing results on tape, at prices from $199 to $318. Five Underwood Sundstrand electric printing adding machines of the ten-key type at prices from $318 to $520. Two Underwood Sundstrand electric ten-key printing adding machines with automatically tabulating carriage for adding and listing in two or more columns on wide forms, at prices from $580 to $835. One electric ten-key Underwood Sundstrand printing calculator, with multiplication and division, priced at $500.

Victor Adding Machine Co., 3900 *N. Rockwell St., Chicago* 18. Victor's extensive list of adding and calculating machines includes models of the Custom, Executive, Champion, and 500 lines. Included are eleven manual ten-key printing models, nineteen full-keyboard manual models, fifteen ten-key electric printing machines, 41 electric full-keyboard machines, and 64 special feature machines, at prices from $109.50 to $420. Also offered are one automatic printting calculator, which is a ten-key electric model with automatic multiplication and division, priced at $635, and a Multi-O-Matic automatic multiplying unit, similar to the printing calculator execept that division is accomplished by the use of reciprocals, at a price of $525.

Bookkeeping and Accounting Machines

Because of the complexity of most of this equipment, no attempt is made here to present detailed descriptions.

Addo-X, Inc., 300 Park Ave., New York 22. The company offers three bookkeeping machines. New is the Model 7341EF, featuring a front feed; a selector device on the rear of the carriage for quick selection of accounts payable, accounts receivable, payroll, and other programs; accumulating register; and a variety of automatic features. This model has a ten-key keyboard. Price range: $629 to $1,374.

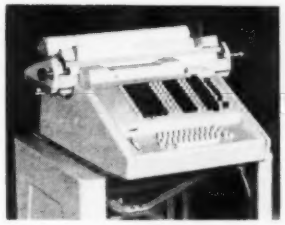
R. C. Allen Business Machines, Inc., 678 Front Ave., N. W., Grand Rapids 4, Mich. The R. C. Allen line includes three bookkeeping machines, designed particularly for payroll, statement, and commercial work of various kinds. These are priced from $420 to $665, plus Federal excise tax.

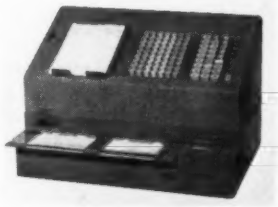
Burroughs Corp., 6071 Second Ave., Detroit 32. The extensive Burroughs line includes 27 Sensimatic, ten Sensimatic-Typewriter, 23 Series M, and six Director 600 bookkeeping and accounting machines, varying widely in functions and features. Sensimatic machines may be programmed for various accounting applications by the use of interchangeable "sensing" panels slipped into the back; each panel handles four applications, any of which may be chosen by turning a job-selector knob. Director models are programmed by means of interchangeable stop and control bars. The Direct Multiplier, a billing machine, combines a typewriter keyboard with direct multiplication facilities. Some equipment is designed to punch paper tape as a by-product of normal operating, to provide machine-sensible records for subsequent automatic handling in integrated data processing systems. Also offered is Sensitronic bank bookkeeping equipment which reads magnetic codes on stripes on business forms; these codes are used to enter data automatically into the machine. Price range: $925 to $10,050. The company also offers a small (about $35,000) electronic computer and larger electronic systems.

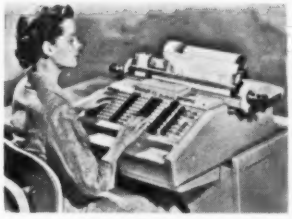
Calculagraph Co., 306 Sussex St., Harrison, N. J. The Calculagraph is a small special-purpose computer used to measure elapsed time for job costing. Units print time and date of starting a job, finishing time, and elapsed time, with automatic deductions for non-working periods. Both electric and spring driven models are available. Prices: $250 to $275.

The Denominator Co., Inc., 261 Broadway, New York 7. This company manufactures a line of group counting and tabulating machines, designed to permit sorting and counting of different types of items. The machines consist of a series of individual counting units, each of which registers the number of times it is touched. In a tabulation of styles of goods sold, for example, there would be a counter for each style, and the operator would touch the appropriate key for each unit sale. The equipment does mechanically, in other words, what would otherwise be accomplished by tabulating with pencil and columnar paper. While most equipment tabulates in increments of one, special multiple-input units are available for applications in which entries are frequently made in large numbers. Offered are counters recording in multiples of 2, 3, 4, 5, 6, 10, 50 and 100. Equipment is available to order, with 700 sizes offered. Uses include payroll denomination, order analysis, consolidation of buying orders, etc. Price range: $5.50 to $3,000.

Friden Calculating Machine Co., Inc., 2350 Washington Ave., San Leandro, Calif. Friden offers a special billing machine called the Model B Computyper, which is a combination of an electric typewriter (Flexowriter) and a calculator. It is an automatic multiplying and writing machine operated from the typewriter keyboard. After an operator types a problem, the machine automatically computes and prints the answer. Variations of the







Bookkeeping and accounting machines can be obtained for practically any kind of work. They vary from relatively simple models to machines capable of reading and recording magnetic spots on the business forms they process. *Top*: Addo-X's front-feed bookkeeping machine. *Second*: Underwood's Post-Master "92," a portable posting machine. *Third*: The Burroughs Typing Sensimatic Accounting Machine with an 84-character typewriter and an accumulating register. *Fourth*: National Cash Register's Class 42 posting machine, which has particular applicability to installment purchase accounting. *Fifth*: One of the accounting machines from the Remington Rand line. *Sixth and seventh*: Two bank bookkeeping machines using magnetic codes on otherwise standard business forms: Burroughs' Sensitronic, and National Cash Register's Post-Tronic.

problem can be programmed and the particular program required is selected on a keyboard. Price: $4,500. Other versions of the Computyper are used in integrated data processing, having facilities for reading and/or recording data in "common language" machine-sensible media such as punched tape or cards.

International Business Machines Corp., 590 Madison Ave., New York 22. Standard IBM equipment uses punched cards, punched tape, or other "common language" media, and is therefore described in the July issue of this magazine, in the review devoted to equipment for "automation in the office." The company's extensive line of punched card equipment, of course, includes facilities for all types of bookkeeping and accounting work. In addition, IBM offers electronic computing systems for handling large volumes of work and/or dealing with complex problems.

International Payroll Machine Co., Box 293, Oxford, Pa. International Payroll offers electric payroll denominating equipment with inputs through a keyboard. It is particularly designed for listing, totaling, and denominating cash payrolls. The company describes the equipment as a "ratio calculator," or a "specialized adding machine with conversion factors built in." The equipment is in the $1,500 to $2,000 price category.

Monroe Calculating Machine Co., Inc., 555 Mitchell St., Orange, N. J. Monroe manufactures four President accounting machines, designed for all types of non-descriptive accounting and posting work, including accounts receivable, accounts payable, payroll, stock record, etc. Programs are selected by turning a selector knob. Machines are offered with up to four registers, and are designed for both unit plan and side-by-side posting. Price range: $1,200 to $1,850. The company also offers Synchro-Monroe accounting equipment, standard machines modified to enter data into machine-sensible form, such as punched paper tape or punched cards, for subsequent automatic handling in integrated data processing systems.

The National Cash Register Co., Main & K Sts., Dayton 9, Ohio. NCR manufactures thirteen bookkeeping machines, designed for accounts receivable, accounts payable, payroll, stock records, and other operations, at prices from $668 to $1,128. Also offered are five lines of accounting machines, with more than one hundred models. These are suitable for a variety of operations, including general accounting, bank, hotel, hospital, and utility company accounting, analysis, etc. Price range: $1,245 to $11,750. Some equipment can be linked to punches to record data simultaneously with regular work, in such machine-sensible forms as punched cards and punched paper tape, for later automatic handling in integrated data processing systems. The line also includes Post-Tronic bank bookkeeping equipment which reads and enters coded data in the form of magnetic spots on business forms; the equipment can be controlled by this information. The company's IDP equipment is covered in the July issue of this magazine in the review of equipment for "automation in the office."

Olivetti Corp. of America, 580 Fifth Ave., New York 36. Olivetti's bookkeeping machine line consists of the following machines: The Electrosumma CR-B, a shuttle carriage adding machine, priced at $485, plus Federal Excise Tax. The Electrosumma CR, an automatic carriage posting machine, priced at $585, plus F.E.T. The Electrosumma CR-S, an automatic carriage bookkeeping machine, priced at $695, plus F.E.T. The A.C.P.C. automatic carriage printing calculator, priced at $940, plus F.E.T. The Audit 202, a two-register bookkeeping machine, priced at $1,050, plus F.E.T. Some of these feature readily interchangeable control bars to permit programming for various accounting applications. Depending on the model, up to four different programs can be pre-set on one bar, the desired program being selected by the use of a control lever.

Remington Rand, Div. of Sperry Rand Corp., 315 Fourth Ave., New York 10. Remington Rand offers a number of accounting and bookkeeping machines, designed to handle a wide variety of descriptive and non-descriptive accounting and bookkeeping functions. Machines may be programmed for a number of operations, and the programs can be interchanged readily. Typical applications are to accounts receivable, accounts payable, budget, payroll, stock records, etc. In addition, the company offers a complete line of punched card accounting equipment, which was described in the July issue of this magazine in the review of equipment for "automation in the office." Also described in that issue was the Remington Rand line of electronic equipment, including large and small computers, designed for high-speed processing of data and for the solution of complex problems.

Royal McBee Corp., Westchester Ave., Port Chester, N. Y. Royal McBee is offering a new Keysort tabulating punch, for use with its marginally punched Keysort cards. The machine is used to punch and print quantities into Keysort cards to accumulate amounts for totaling, and to total the accumulations and summary punch the data into blank cards. It can also be used as a standard ten-key adding machine. Other functions are to print details on tape; to take inputs from punched cards, print detail and accumulate simultaneously, and to produce punched duplicate cards. The company also offers accessory equipment such as a Keysort Data Punch and furniture. The LGP-30 desk-size electronic computer was described in the July issue in the review of equipment for "automation in the office" (See listing in that issue under Royal Precision Corp.)

Underwood Corp., 1 Park Ave., New York 16. Underwood's line of bookkeeping and accounting equipment consists of five Underwood Sundstrand and three Underwood Elliott Fisher machines, ranging in price from $700 to $5,000. The equipment is designed to accommodate a variety of accounting and bookkeeping functions, such as accounts receivable, accounts payable, general ledger, etc. One Elliott Fisher model is equipped with a flat writing surface and is designed to eliminate the handling of carbon paper. Ten-key keyboards are used in machines of both lines for arithmetical inputs.

Universal Business Machines, Inc., P. O. Box 5183, Columbia, S. C. Uni-

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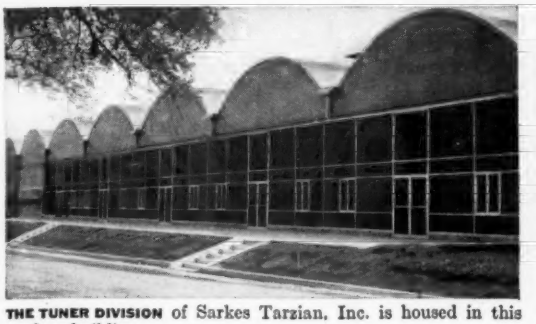
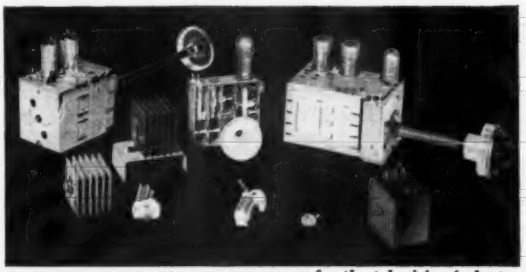


THE TUNER DIVISION of Sarkes Tarzian, Inc. is housed in this modern building.

S. TARZIAN, President of Sarkes Tarzian, Inc.



A VARIETY OF HIGH-QUALITY PRODUCTS for the television industry are manufactured by Sarkes Tarzian, Inc.

THIS NATIONAL CLASS "31" handles even the most complex accounting jobs with maximum efficiency and speed.

"Our *National* System saves us $31,600 a year... pays for itself every 11 months!"

—Sarkes Tarzian, Inc.
Bloomington, Indiana

"The television industry has grown tremendously in a relatively short period of time. To provide an accounting set-up flexible enough to absorb this expansion, we installed a National System," writes C. F. Clapham, controller of Sarkes Tarzian, Inc. "Our Nationals have done the job—and saved thousands of dollars for us in the process!

"The accounting department at Sarkes Tarzian uses Nationals to do a variety of jobs. Among the most important of these is broadcast accounting which our National System handles with speed and accuracy. We also use Nationals for accounts payable, general ledger and payroll. Our National Accounting Machines perform these jobs efficiently and economically, greatly reducing the amount of time and effort ordinarily required for them. And because our Nationals are so easy to operate, they make it easier for us to train new personnel, too.

"By increasing the efficiency of our operation, our National System saves us at least $31,600 a year, pays for itself every 11 months!"

—C. F. Clapham,
controller of Sarkes Tarzian, Inc.

Your business, too, can profit from the greater economy made possible by a National System. Nationals pay for themselves quickly through the savings they make for you, then return a handsome yearly profit. For complete information, call your nearby National representative today. You'll find him listed in the yellow pages of your phone book.

*TRADE MARK REG. U. S. PAT. OFF.

National

ACCOUNTING MACHINES
ADDING MACHINES • CASH REGISTERS
NCR PAPER (NO CARBON REQUIRED)

THE NATIONAL CASH REGISTER COMPANY, Dayton 9, Ohio

989 OFFICES IN 94 COUNTRIES

versal offers a line of electrically operated sorting machines, priced from $4,000 to $8,500, for high-speed sorting of accounting records and other materials. Using a keyboard, the operator selects the letter or numeral according to which a document is to be sorted, presses it, and the form is taken from the top of the stack and delivered automatically to a bin. Machines with numeric and alpha-numeric keyboards are offered.

Victor Adding Machine Co., 3900 N. Rockwell St., Chicago 18. This company produces the Victor Posting and Statement Machine, designed to handle office computations, plus posting of accounts payable and accounts receivable, and such operations as open item statement work and fold-over statement work using carbon copies for general ledger. The equipment can also perform general ledger work. Price range: $448 to $528.

"One-Writing" and other Bookkeeping and Accounting Systems

Equipment of the "one-writing" type is designed to permit the writing of several accounting forms simultaneously. By placing the forms one above another in such an alignment that items written on the top form may be transferred to the forms below by means of carbon, it is possible to create several different forms that use the same information. Since in most cases, only selected items should appear on each form, provisions are made to prevent transfer of unwanted items. This can be accomplished by the use of spot carbon, or by providing an area printed with a heavy design on which information, even though copied by carbon, is not legible. In addition, certain forms can extend beyond the edges of other forms when they are properly aligned, so that material which is not to be copied can be placed on the portions that do not overlap.

The key to successful arrangements of this type is threefold: Proper form design so that information can be recorded in the necessary number of places with a minimum of effort in writing the form and in using the completed form, provision of a suitable device for holding a set of forms in proper registration, and an appropriate use of carbon paper or spot carbon.

Tools of the Office

All of these factors are taken care of by the manufacturers of the equipment and forms. The actual device used to hold the forms, however, may be of several types. One of the popular designs, known as a "pegboard," consists basically of a flat writing surface which has been equipped with pegs or other means for holding the forms in registration, and which usually has some mechanical device for advancing from one set of forms to the next on completition of each set. The latter may be accomplished by a ratchet and lever system, although sometimes the "board" is actually a box, with a roller system for mounting and advancing one or more of the forms.

Similar results may be accomplished without the use of a board, however. A type of loose-leaf binder or other book-enclosed device can be used to hold the forms in alignment, for example. Actually, the same principle is used in some kinds of machine bookkeeping, with several forms being printed at once. The latter method, however, is not usually meant by the expression "one-writing," which refers to manual methods usually. Most "one-writing" systems are used in small companies—or small departments of larger companies — for applications such as payroll, accounts receivable, accounts payable, and inventory. Other uses are possible, but these are the ones most commonly found. Obviously, the difference between one application and another lies in the selection and design of the forms, not in the design of the basic equipment.

A few specialized systems, not of the "one-writing" type have also been included.

Bates Accounting Forms Co., Inc., 33 W. 42 St., New York 36. Bates produces the Auditrol and Ever Ready lines of binder-type systems. While current details were not available at press time, prices a year ago were as follows: For accounts receivable and payable, from $22.75 up; for payroll, with payment by check, from $99 up; for payroll, with payment in cash, from $38.95 up.

Readers wishing further information from manufacturers of products listed in the Tools of the Office section may use the Readers' Inquiry Coupon on the last page.

The Blackbourn Systems, Inc., 230 S. Cedar Lake Rd., Minneapolis 5. This company offers a line of binder-type systems using loose-leaf, post, and ring types, suitable for such functions as accounts payable, accounts receivable, general ledger, inventory, etc.

Burroughs Corp., Todd-Hadley Div., 6071 Second Ave., Detroit 32. Todd-Hadley offers the Multipharious and Unispred lines of loose-leaf-binder-type systems, for payroll, accounts receivable, and accounts payable, at prices from $50 up, and for financial and statistical reports, at prices from $10 up. Also available are three pegboard lines: the Form-Master, for payroll; three Multi-Record and Peg Strip systems, for payroll, accounts receivable, accounts payable, and tabulations. Prices: from $50 up.

Business Systems Corp., 436 Pearl St., New York 38. Two systems are offered: Accu-Rite and Paycomptroller, for such purposes as payroll, accounts receivable, accounts payable, and inventory. Accu-Rite is a book-enclosed device; Paycomptroller is of the pegboard type.

Cel-U-Dex Corp., 1 Main St., Brooklyn 1, N. Y. Cel-U-Dex offers post binders for use in bookkeeping work.

Charles R. Hadley Co. SEE: Burroughs Corp., Todd-Hadley Div.

The Institute of Business Research, Div. of Keller-Crescent Co., 28 S. E. Riverside Dr., Evansville 8, Ind. This organization offers a new Ledger-Checks System of the one-writing type for recording receipts and expenditures as regular deposit slips and checks are written. It consists of a loose leaf journal with a correlated checkbook and ledger.

Keller-Crescent Co. SEE: The Institute of Business Research, Div. of Keller-Crescent Co.

Le Febure Corp., Cedar Rapids, Iowa. Le Febure's Short Cut Bookkeeping Systems consist of a coordinated set of business forms and equipment for housing them and providing working facilities. Designed primarily for accounts receivable, the systems feature the elimination of daily posting by collecting necessary records applicable to each account in convenient card trays where they are available for reference at any time and for complete handling at billing time. The

time of recopying, with the additional danger of error, is eliminated. Le Febure also offers systems for bank bookkeeping and other clerical and accounting functions.

David Lyons Co., 2100 *Greenleaf St., Evanston, Ill.* This company offers the Lyons-Visual Balanced Inventory System, a system employing coordinated charts, forms, and cards for inventory control.

Master-Craft Corp., Div. of Shaw-Walker, 831-903 *Cobb Ave., Kalamazoo, Mich.* Master-Craft offers a line of one-writing systems of the binder type, designed primarily for handling small payrolls.

The McBee Co., Div. of Royal McBee Corp., Smith St., Athens, Ohio. The McBee General Records Poster is a one-writing system of the pegboard type. It is designed for use in accounts payable, accounts receivable, and payroll, and can be adapted to other operations. Adjustments from one function to another are made by the simple removal or addition of accessories that snap or slide into position, and, of course, by the use of appropriate forms. The company also offers its line of Keysort marginally punched cards, for sorting and tabulating operations; cards are needle-sorted. Other products include key-punching equipment, such as the Keysort Data Punch and the new Keysort Tabulating Punch. The latter machine is described in the preceding section, covering bookkeeping and accounting machines, under the listing for the Royal McBee Corp.

McMillan Book Co., 701 *E. Genesee St., Syracuse, N. Y.* This company manufactures an extensive line of forms, binders, and other items useful in bookkeeping and accounting. Details on current products were not available at press time.

The National Blank Book Co., Holyoke, Mass. National Blank Book's line includes one-writing systems of the binder type, for various bookkeeping and accounting purposes.

Norfield Methods & Procedures, Inc., 933 *S. Clinton Ave., Oak Park, Ill.* Norfield's Copy-Writer is a pegboard type one-writing system which can be used for accounts receivable, accounts payable, and payroll. One modification is intended particularly for school payrolls.

Payroll Tax Service, Inc., 44 *W.* 29 *St., New York* 1. This company offers the Payrollmaster, a pegboard-type one-writing system designed for use in payroll, accounts receivable, accounts payable, and other bookkeeping and accounting work. The board has a sloping writing surface, and it is designed to position all forms automatically at a fixed writing position.

The Reynolds & Reynolds Co., 800 *Germantown Ave., Dayton 7, Ohio.* Reynolds & Reynolds, maker of a wide variety of accounting systems, includes in its line a series of pegboard-type one-writing systems for payroll work.

S. K. Forms Co., 1619 Walnut St., Philadelphia 3. S. K. offers a line of pegboard-type one-writing systems for payroll operations.

Safeguard Corp., Lansdale, Pa. Safeguard offers several one-writing systems of the pegboard type, designed for use in handling check payrolls, cash payrolls, and general disbursements.

The Shaw-Walker Co., Muskegon, Mich. Shaw-Walker's Kopi-Spot Payroll Plan is a board-type one-writing system for the simultaneous preparation of related payroll records. In addition, the company supplies a variety of forms and accessory equipment. SEE ALSO: Master-Craft Corp., which is a division of the Shaw-Walker Co.

The C. E. Sheppard Co., 44-01 *21st St., Long Island City 1, N. Y.* This company offers Multi-Rite one-writing systems of the pegboard type. These are suitable for such operations as payroll, accounts receivable, cash receipt, time payment, club accounts receivable, passbook time payment, hospital charge control, etc. New is a system for insurance agency record keeping. Also offered are binders which accommodate all forms used in the Multi-Rite systems.

Speedograph, Inc., 5440 *S. Ashland Ave., Chicago* 9. Speedograph offers one-writing systems of the pegboard type, for such varied purposes as accounts receivable, accounts payable, and payroll.

The Todd Co., Inc. SEE: Burroughs Corp., Todd-Hadley Div.

Visirecord, Inc., Copiague, L. I., N. Y. Visirecord's Triposter is a one-writing system in which accounting forms are placed on a writing surface which forms the top of a flat, box-like device. The latter contains mechanical arrangements for holding forms in registration and for advancing them

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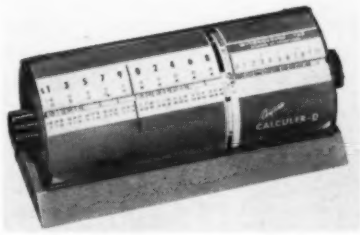
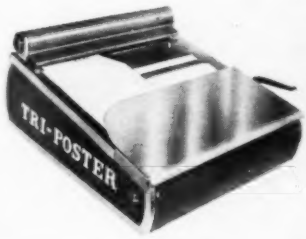
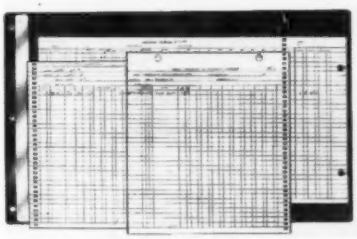
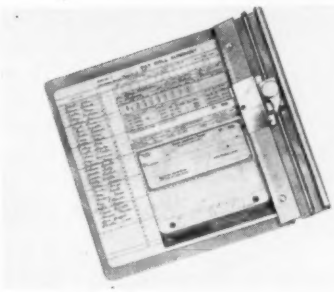








Manual method can be helpful in handling bookkeeping problems, not only in small companies, but also in small departments of large companies. *Top:* Ayres' Calculer-D, for quick computation of payroll taxes. *Second through fourth*: Three designs of "one-writing" systems in which several related accounting forms can be prepared at once, repetitive information being transferred from one to another by carbon. Visirecord's Tri-Poster; C. E. Sheppard's new Multi-Rite system for insurance agency record keeping; and Shaw-Walker's Kopi-Spot payroll system.

after each posting, and the carbon used in the system is contained within the machine, to eliminate handling it. This equipment is available for such operations as installment accounts receivable, small loans, layaway, window posting, and so on.

Wilson Jones Co., 209 S. Jefferson St., Chicago 6. Wilson Jones offers a special Short Cut Credit Sales System for recording charge and time payment sales for small businesses. The system consists of a ledger tray, index guides, folders, and appropriate forms. Price: $29.50.

Charts, Tables, Scales, and Miscellaneous Devices

Ayres Corp., Box 1081, Wilmington, Calif. Ayres' Calculer-D is a small machine for computing payroll tax deductions. Basically, it consists of a cylindrical device containing a rotating drum, the drum carrying a chart which shows the deductions for F.I.C.A. and withholding tax. Drums are interchangeable for varying pay periods. Price: $15.70.

Bates Accounting Forms Co., Inc. 33 W. 42 St., New York 36. The Taxmeter is a small device containing a rotating drum, the drum carrying a chart showing pre-computed taxes. Drums are interchangeable. Standard drums show two taxes simultaneously, which may be Social Security and withholding taxes, or various state and/or federal taxes in differing combinations. Drums are available for pay periods of different lengths. Also offered are Colordex payroll tax charts and Calcucharts for computing wages.

Delbridge Calculating Systems, Inc., 2502 Sutton Ave., St. Louis 16. Delbridge offers a line of charts, tables, and scales giving figures for a wide variety of accounting purposes. These include charts for figuring wages, withholding taxes, Social Security taxes, interest, personal loans, amortization, time payments, and other matters. A number of specialized charts are available. The Delbridge Time Master is an elapsed time calculator of the revolving disk type, made to fit a standard three-ring binder.

Friden Calculating Machine Co., Inc. 2350 Washington Ave., San Leandro, Calif. In addition to its extensive line of adding, calculating and accounting machines, Friden offers a list of charts to assist in bookkeeping and accounting work. Tables cover such diverse subjects as interest divisors on 360- and 365-day bases, conversion of ounces per bottle to gallons per case, reciprocals, installment loan factors, days expressed as decimal parts of a month, time-and-one-half overtime factors, etc.

Charles F. Herbstreith Co., Nutley, N. J. While current information was not available at press time, this company has made printed plastic pocket calculators, charts and conversion tables, price discount and rate tables, etc.

Payroll Tax Service, Inc., 44 W. 29 St., New York 1. This company offers a weekly tax deduction chart showing Social Security, federal withholding, New York Disability, and New Jersey unemployment taxes. Price: $2.

W. H. Pusch, 427 W. Lynwood, San Antonio, Tex. Pusch offers two disk-type plastic slide rules with scales giving answers in dollars and cents. The 78er is designed for "sum-of-the-digits" problems such as are encountered in installment-payment accounts and loans. The Insurater is used in prorate and short-rate property auto insurance problems. Prices: $4.50 and $5, respectively.

Silver Bells, Ltd., 3367 Fernside Blvd., Alameda, Calif. Silver Bells' line includes aluminum disk-type scale calculating devices for commercial and technical calculations.

Specialty Papers Co., 2028 Farrington St., Dallas. This company offers a disk-type scale for computing elapsed time for payroll calculations.

Machine Work Station Equipment

Because of the importance of good physical arrangements of machines, work areas, and record housing facilities in creating efficient work stations, manufacturers of some of the major items of equipment involved are listed below.

Acme Visible Records, Inc., Crozet, Va. Posting desks, tub desks, and posting trays.

Readers wishing further information from manufacturers of products listed in the Tools of the Office section may use the Readers' Inquiry Coupon on the last page.

Next Month:

Intercommunications equipment; dictating and transcribing equipment

R. C. Allen Business Machines, Inc., 678 Front Ave., N. W. Grand Rapids 4, Mich. Machine and posting desks, posting trays, machine stands and posting stands.

Art-Steel Equipment Inc., 100 Griffith Ave., Aurora, Ill. Machine desks and posting desks.

Art Steel Co., Inc., 170 W. 233 St., New York 63. Machine and posting desks. Machine tables.

Automatic File & Index Co., 549 W. Washington Blvd., Chicago 6. Posting trays and tub files.

Browne-Morse Co., Muskegon, Mich. Machine desks.

The Buckstaff Co., 1122 S. Main St., Oshkosh, Wis. Machine tables.

Burroughs Corp., Todd-Hadley Div., 6071 Second Ave., Detroit 32. Machine desks, tables, and stands. Posting desks, trays, and stands.

Business Efficiency Aids, 8114 N. Lawndale Ave., Skokie, Ill. Posting desks, trays and stands.

Cole Steel Equipment Co., Inc.., 415 Madison Ave., New York 17. Machine stands.

Columbia Steel Equipment Co., Fort Washington, Pa. Machine desks. Posting desks and trays.

Corry-Jamestown Mfg. Corp., 44 N. Center St., Corry, Pa. Machine desks. Posting desks and trays.

Cramer Posture Chair Co., 1205 Charlotte St., Kansas City 6, Mo. Machine stands.

D & L Office Furniture Co., 61 W. Hubbard St., Chicago. Machine desks.

Dependable Mfg. Co., 2407 Fort Crook Rd., Bellevue, Neb. Machine stands.

Desks of America, Inc., P. O. Box 6185, Bridgeport 6, Conn. Machine tables.

Diebold, Inc., 2011 Mulberry Rd., Canton 2 Ohio. Posting trays and stands.

Durable Metal Products Co., 1709 St. Marks Ave., Brooklyn 33, N. Y. Machine tables.

Excellent Cabinet Works Co., 415 Withers St., Brooklyn 22, N. Y. Machine tables. (*To page 60*)

HERE'S HOW...

Hinde & Dauch uses ADP to speed its orders, invoices and reports

The Company's previous order-processing system was slow because of a large number of manual operations. Automated Data Processing produced a fast-moving and accurate system built around Flexowriters, tapes with necessary codes, and Moore forms.

Master tapes furnish the constant information for each Order. As each Production Order is typed, another cable-connected Flexowriter prepares a Route Ticket. Simultaneously, a tape is punched (as a by-product) and is used to feed information to still another Flexowriter for an invoice-typing operation. This also produces, as a by-product, a statistical tape which is the starting point for sales analyses, salesmen's statements, and other statistical reports.

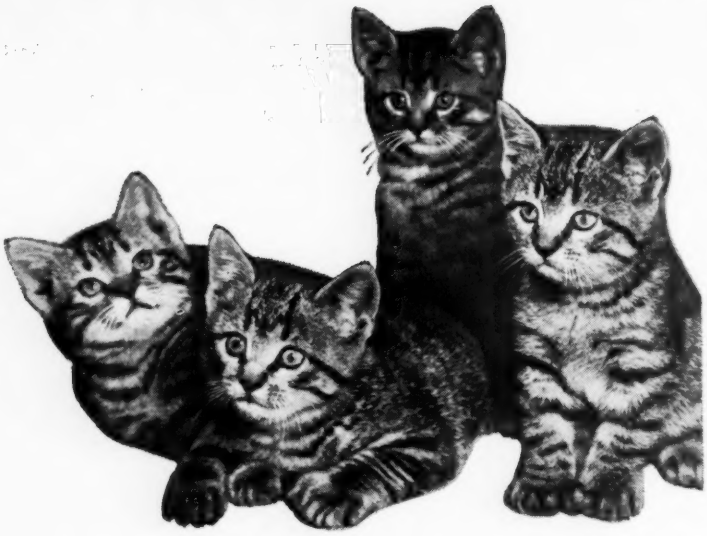
The system has eliminated delays, keypunching (and verifying) and manual typing of invoices. Control and quick information are positive assets. The Moore man helped in the design and construction of Moore Marginal Punched Continuous Forms to fit the ADP system: an 8-part Production Order; a 13-part Route Ticket; and a 7-part Invoice.

If you would like to read the details in this booklet, write on your Company letterhead to the Moore office nearest you.

MOORE BUSINESS FORMS Inc

NIAGARA FALLS, N.Y. · DENTON, TEX. · EMERYVILLE, CALIF.

Since 1882 the world's largest manufacturer of business forms and systems. Over 300 offices and factories across U.S., Canada, Mexico, Caribbean and Central America.



Even their mother couldn't tell 'em apart. It's equally hard to tell the *last* copy from the first when *all-new* Colitho Direct Image Paper Plates and duplicating supplies do the job!

COPIES

that look alike

The secret of this greater *uniformity* is that from plate to plate, box to box and shipment to shipment, Colitho Direct Image Paper Plates are *ph Control-coated to closer tolerances than ever before.* And Colitho Etch and Fountain Solution are specially formulated to bring out the exact same sparkling appearance from every plate.

Systems men and duplicator operators the country over are discovering this great new uniformity Colitho gives all their offset duplicating. For the name of your nearest Colitho supplier, write: Columbia Ribbon & Carbon Mfg. Co., Inc. Glen Cove, New York.

COLITHO OFFSET DUPLICATING PLATES AND SUPPLIES

Tools of the Office

(*From page* 58)

Louis H. Farber Co., 31 *E. Congress St., Chicago* 5. Machine stands.

Ferris Business Equipment, Inc., 45 *Seymour St., Stratford, Conn.* Tub files.

The General Fireproofing Co., 413 *Dennick Ave., Youngstown, Ohio.* Machine desks and stands. Posting desks, trays, and stands. Machine tables. Tub desks and files.

The Globe-Wernicke Co., Norwood, Cincinnati 12. Machine stands.

Goodfrend Metal Products Co., 1019 *E. 75 St., Chicago* 19. Machine stands.

Harter Corp., 80 *Prarie Ave., Sturgis, Mich.* Machine stands.

Haskell, Inc., 303 *E. Carson St., Pittsburgh* 19. Machine desks, tables, and stands. Posting desks.

Hedges Mfg. Co., 2931 *Wentworth Ave., Chicago* 16. Tub files.

Imperial Desk Co., 1312 *W. Florida St., Evansville* 7, *Ind.* Machine desks.

Indiana Desk Co., Inc., 1226 *Mill St., Jasper, Ind.* Machine desks.

Intasco Corp., 3021 *Carroll Ave., Chicago* 12. Posting trays and stands.

Invincible Metal Furniture Co., 842 *S. 26 St., Manitowoc, Wis.* Machine desks.

Jasper Office Furniture Co., 13*th* & *Vine Sts. Jasper, Ind.* Machine desks and posting desks.

Jasper Table Co., Inc., 206 *Main St., Jasper, Ind.* Machine tables.

KOL, Inc., 2323 *Ellis Ave., St. Paul* 14. Machine tables and stands.

Karl Mfg. Co., 32-24 *Ionia Ave., S. W., Grand Rapids* 2, *Mich.* Machine tables and stands.

King Posture Chair Co., 953 *S. Raymond Ave., Pasadena* 2, *Calif.* Machine tables.

Le Febure Corp., Cedar Rapids, Iowa. Machine desks. Posting desks, trays and stands. Tub desks and files.

Lit-Ning Products Co., 3907 *Duquesne Ave., Culver City, Calif.* Posting trays and stands.

The Marshallan Mfg. Co., 1061 *W.* 11 *St., Cleveland* 13. Machine tables and stands.

Maso Steel Products, 53 *W. Jackson Blvd., Chicago* 4. Machine tables and stands. Posting trays.

Metalstand Co., 7520 *State Rd., Philadelphia* 36. Machine stands.

Modern Steelcraft, 230 *Fifth Ave., New York.* Machine tables and stands.

(*To page* 86)

Domore®

presents a new idea in office chairs

- *Styled by Raymond Loewy Associates*
- *Individually Fitted for Day-Long Comfort*

Here, for the first time, is an office chair that combines the most efficient functional design with sleek, smart, styling. *And* it's a Do/More chair—with Do/More's exclusive posture features that insure so much more healthful working comfort for every employee.

- **Completely adjustable to user's physical proportions**
- **New contour-molded, foam cushioned seat and back**
- **Enclosed, swivel mechanism**
- **Non-marring, plastic-sheathed back-piece. Non-marking ball-bearing casters with no-snag thread guard plate on wheel.**
- **Choice of fabrics**

For all secretarial and clerical uses

Private Secretaries

Clerical Workers

Accountants Bookkeepers

Payroll Clerks

Electronic Computers

mail coupon for complete information

DOMORE Chair Company, Inc. 2411 Sterling Ave., Elkhart, Indiana

☐ Please send full information on Do/More Office Chairs

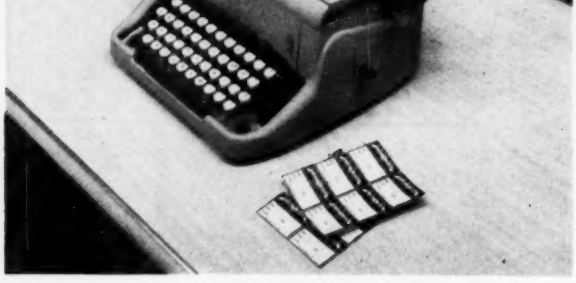
name ↓ *company* ↓ *address* ↓

By means of the "Safe Swisher," heavy office equipment is transported in a simple, easy manner

Specialized equipment, techniques, speed and simplify office moves

WITH the recent upsurge in moves to new quarters by a host of companies across the nation, the importance of the industrial mover in changeover operations has swung into sharp focus. Emphasizing safety and speed, such firms as The 7 Santini Brothers, New York City, have developed special programs for the packing, shipping and placing of furnishings in new quarters according to the requirements of the office being serviced.

On these pages are illustrated some of the steps in Santini's "7 League Idea" program, designed to assure proper and expeditious handling of office equipment in transit. The program's seven steps, as outlined by the company, will: Save moving time, eliminate office clutter, insure safety, avoid loss of parts, simplify identification, accommodate large and bulky items and, as a result, enhance the possibility of doing a better job.



"Pressure Sensitive" labels (left) and "Part-Saver" plastic bags help identify equipment, keep small parts together

Use of "Nesting" boxes eliminates space problems, office clutter

Mishandling of office machines and equipment in transit can prove unnecessarily costly in both time and money. But from use—by experienced "Gentlemen Movers"—of such innovations as the "Nesting Box," "Safe Swisher," "Part-Saver," "Writing Machine Pram," "Pressure Sensitive Label" and the "Catch-All" (which conveys countless loose items), the firm completes the usual intra-city move in a single day.

For busy managements, whose office time is precious, this opportunity to enter new premises in a matter of hours is invaluable.

"Pullman" conveyor insures safe movement of typewriters

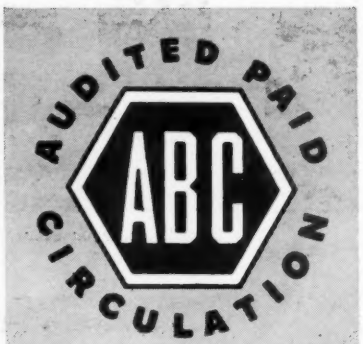
Experienced moving teams can also use "traditional" methods when necessary

ABC PUBLICATIONS ARE INVITED AND PAID FOR!

When readers PAY... advertisers get reader interest that PAYS OFF

AN AUTOMATIC CHECK ON EDITORIAL SERVICE

An ABC PAID publication can never rest on its laurels. The fact that it achieved PAID status because it offered a vital service is not enough. It has the *ever continuing obligation* to be of indispensable value to its readers because they will renew *only* if the publication *continues* to serve their needs. The result is an automatic self-policing formula of value for both reader and advertiser. PAID circulation demands highest editorial service – and highest editorial service *commands* paid circulation! When you advertise in an ABC PAID circulation paper, you *know* you are reaching readers who pay–and reader interest that pays off!



This symbol indicates a reader audience that has responded to a publication's editorial appeal . . . by **willingness to PAY for it.** With the interests of readers thus identified, it becomes possible to reach specialized groups effectively with specialized advertising appeals.

ABC PAID PUBLICATIONS GIVE YOU THESE FACTS:

- How much paid circulation.
- How much unpaid circulation.
- Prices paid by subscribers.
- How the circulation was obtained.
- Whether or not premiums were used as circulation inducements.
- Where the circulation goes.
- A breakdown of subscribers by occupation or business.
- How many are in arrears.

OFFICE MANAGEMENT has the largest ABC PAID circulation, by far, in the specialized office field—more than 26,000* as of May 1957. Management Executives concerned with office administration pay to receive OFFICE MANAGEMENT because they need it and want it. They are the men who initiate and okay the billions of dollars of expenditures for all office equipment, services and supplies. **Subject to ABC Audit*

OFFICE MANAGEMENT

The Magazine for Management Executives

212 Fifth Avenue **New York 10, New York**

Forms—

(*From page 46*)

ments, U. S. Government Printing Office, Washington, D. C. For a more exhaustive treatment, probably the best source is Frank Knox, "Design and Control of Business Forms," in the NOMA Services in Office Management published by McGraw-Hill. But first redesign your simple forms. It will pay off.

People in the News

(*From page 42*)

tions, and is succeeded as personnel manager by *Richard C. Allen*.

Theodore E. Hart has been named secretary-treasurer of Alloy Precision Castings Co., Cleveland.

Albert D. Sherman, director of purchases, The Sorg Paper Co., Middletown, Ohio, has retired, and *Robert L. Foster* has been named manager of purchasing.

Daniel McBride and *Alex J. McFarland* have been elected treasurer and secretary, respectively, of Datamatic Corp., Newton Highlands, Mass.

William J. Cantwell has been appointed administrative assistant for systems and procedures for Old Republic Life Insurance Co., Chicago.

Lewis C. Hatch has been named to the office of controller with Yard-Man Inc., Jackson, Mich.

A. Donald Brice, director of advertising and public relations for Dictaphone Corp., New York, has been named chairman of the newly formed Advertising and Public Relations Committee of the Office Equipment Manufacturers Institute.

Albert J. Borelli has been appointed to the newly created position of personnel manager of the sales division, National Electric Products Corp., Pittsburgh.

T. Edward Beehan and *Reginald I. McKenzie* have been appointed secretary and treasurer, respectively, of Aerojet-General Corp., Azusa, Calif.

W. A. Marshall, secretary-treasurer of Toledo Edison Co., has also been named vice president. *W. R. Moran,* formerly assistant secretary, has been named controller and assistant treasurer. *R. B. Williams,* formerly assistant treasurer, has been named treasurer and assistant secretary.

Bruce Lintner and *Harold Hobbs* have been elected treasurer and secretary, respectively, of Delhi-Taylor Oil Corp., Dallas, succeeding former secretary and treasurer *S. B. Petrie,* who has become management consultant on financial affairs.

John H. Gage has been appointed treasurer of Schine Enterprises, New York.

J. H. Miracle has been named treasurer of United Gas Corp., Shreveport, La.

Melvin C. Holm, vice president and former controller, Carrier Corp., Syracuse, has succeeded *Fred F. Hoyt* as chief financial officer and treasurer. Mr. Hoyt has been named vice president in charge of long-range planning, a new post. *Leon C. Hutton* has been named controller.

Robert E. Kappauf has been named controller of the New York Central Railroad, New York, succeeding *George H. Albach,* who has retired.

Joseph W. Dodwell has been appointed chief auditor, American Radiator & Standard Sanitary Corp., New York.

Here is how you can control a "lion-sized" business problem

Here is information on a poorly understood business problem . . . the problem of odors. Very few executives understand the impact of odors on profits. However, odors influence personnel turnover, efficiency, sales results and production.

Airkem, Inc., is an international organization specializing in the control of odors. In this literature the effect of odors on profits is explained, as is the Airkem technique for their control. Write for those you require:

1. Personnel and customer relations. How stuffy or odorous air can be treated to improve business operations.

2. Industrial odors and sanitation. Covers process odors, waste treatment, industrial sanitation.

3. Emergency odor treatment. How to reduce fire smoke losses. A special service recommended to insurance firms and cargo handlers.

Write for the literature you want, today

airkem
specialists in odor control

AIRKEM, INC., 241 E. 44th St., New York 17, N. Y.

Please send me your literature on the following business problems:

- ☐ Personnel and Customer Relations
- ☐ Industrial Odor and Sanitation Problems
- ☐ Emergency Odor Treatment
- ☐ I want advice on this odor problem:

Name _____ Title _____

Company _____

Address _____

City _____ Zone ____ State ____ OM-8

AUTOMATION
IN THE OFFICE

Computer translates four languages into English

Above: Blue Cross inaugurates its new private wire system. Below: Peter Toma inspects tape on which glossaries are stored

COMPUTERS, which have already proved capable of translating Russian into English, have now moved into the mass translation area. A Datatron Electronic Computer has been programmed to translate Russian, French, German, and Spanish into English, and to make its translations in logical, idiomatic phrases, rather than in word-for-word translations.

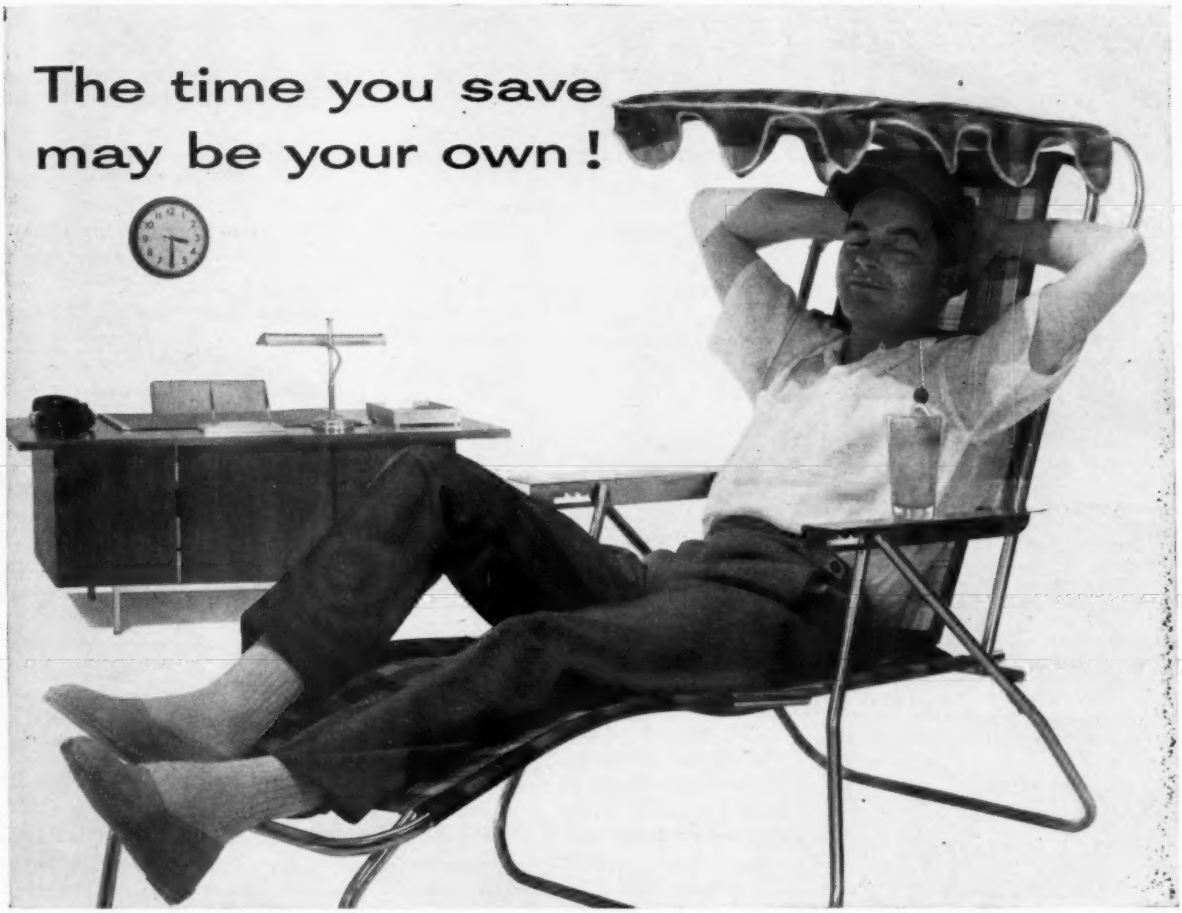
The ElectroData Division of Burroughs Corporation demonstrated this new ability of its Datatron electronic computer at a demonstration last month at its headquarters in Pasadena, Cal. Texts in Russian, French, German, and Spanish were fed into the machine by Peter Toma, who devised the "semantic unit" formula by which the machine translates phrases from one language to another, and precise English translations were printed by the unit on an electric typewriter.

Mr. Toma, a Hungarian who left his country in 1945, developed his formula during a year of research at California Institute of Technology. Basis of the system is four specially condensed dictionaries of Russian, French, German, and Spanish. These were punched on paper tape in numerical computer language, together with instructions telling the machine how it should proceed in translations.

Semantic and logical word patterns in the language being translated are compared by the machine with prestored glossaries to insure that the English translation will render the sense or thought behind each foreign phrase, rather than word-for-word translation, in converting the foreign text to English.

In the press demonstration, each of the four "dictionaries" contained about 500 words each, but, ElectroData pointed out, the Datatron capacity can be increased by adding Datafile units, which serve as external "memories." Thus, much more comprehensive dictionaries could be stored in the machine.

The time you save may be your own!



YOU'LL DUCK HOURS OF PAPER WORK WHEN YOU HAVE A KODAK VERIFAX COPIER

LIKE TO get away early today? Or would you just like more time to think? Try the pencil trick, used by thousands of busy executives to speed communications and lighten the office load. Works like this: when a letter asks questions—jot the answer in the margin and mail a Verifax copy as your reply. When a report refers to several departments—jot again . . . send each a Verifax copy.

Big break for your secretary, too. Saves her pages of dictation and typing. Takes her only 1 minute to make 5 Verifax copies of anything you hand her. Cost: just 2½¢ each. Chances are your savings the very first month will pay for your Kodak Verifax Copier.

Free . . . new Don Herold booklet.

Famous cartoonist-humorist offers a painless treatise on latest office techniques—describes the 101 short cuts Verifax copying has brought to thousands of offices • How to answer mail without dictation and typing • How to do "all-day" retyping jobs in 20 minutes • How to make an offset master in 1 minute • Just mail coupon. Or phone Verifax dealer listed in "yellow pages" under "Photocopying Machines."

Price quoted subject to change without notice.

ONLY $148 . . . Kodak's new Verifax Signet Copier makes 5 copies in 1 minute for 2½¢ each . . . gives you dry, ready-to-use copies, as accurate and long lasting as the original. It's a *completely different copier.*

Verifax Copying

DOES MORE . . . COSTS LESS . . . MISSES NOTHING

MAIL COUPON TODAY

EASTMAN KODAK COMPANY, *Business Photo Methods Division*
343 State Street, Rochester 4, N. Y.

Gentlemen: Please send free copy of Don Herold's new booklet "How I Learned the Verifax of Life." 72-8

Name _____ Position _____

Company _____

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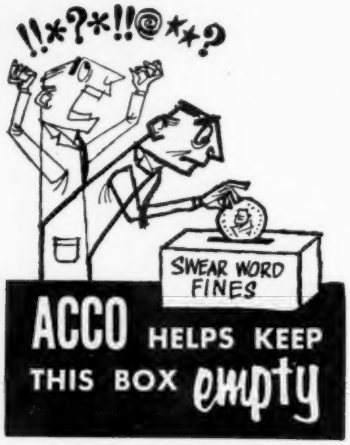
City _____ State _____

Kodak



Boy! The things that can happen in an office to make you swear!—Lost letters, mis-filed reports, mis-laid sheets, a file folder that spills its contents, papers blown about by drafts, knocked off desks, mis-handled or destroyed.

Why pay penalties for such misfortunes? Do away with them! Start Accobinding! That's the binding-filing-safe-keeping system that keeps all related papers together as long as *you* want them.

Accobind Folders and Accopress Binders are available in sizes to fit all your filing needs — and they last for years. Ask your stationer to tell you more!

The Accopress Binder combines loose leaf convenience, large capacity and economy. Ideal for Catalog Covers.

When transfer time comes just slip the bound papers from the Accobind Folder, insert a new Acco Fastener and the Folder is ready for another year's filing.

ACCOBIND folders

ACCOPRESS binders

PIN-PRONG binders
(for marginal multiple punched forms)

ACCO clamps

ACCO punches

THE ACCOWAY SYSTEM
(for filing Blueprints and all large sheets)

and other filing supplies

ACCO PRODUCTS
A Division of NATSER Corporation
Ogdensburg, N. Y.

In Canada: Acco Canadian Co., Ltd., Toronto

Datatron also appeared in the news last month with the announcement by the Atlantic Companies — Atlantic Mutual Insurance Company and Centennial Insurance Co.—that they have become the first property insurance firms on the East Coast to install a Datatron-Cardatron electronic computer system to handle a full range of accounting and data processing problems. The Datatron, in its first applications, will reconcile brokers and agents accounts with company records, compute premium reserves, and carry out cargo premium billing.

IBM adds features to 774

International Business Machines announced last month that two new optional features are now available to increase the capacity and flexibility of the company's 774 Tape Data Selector, which acts as a "translator" between magnetic tape units and card-operated machines.

The two newly offered features are additional magnetic core storage, and a file search device.

The 774 "translates" magnetic tape data into cards by providing a punched card "image" of data recorded on tape. The type of coding used to record data on magnetic tapes is automatically converted to 12-position punched card code before it enters the magnetic core storage section of the machine. Thus the data are available in storage as output to initiate punching and comparing operations by accounting machine units.

According to IBM, the new file search feature will make it possible for 774 users to locate rapidly any individual record or class of records within a file of magnetic tapes. For instance, if management should wish to see all expense items relating to a given department, the 774 can quickly be set up to isolate them from the expenses of other departments for the same period, and make the information available either in the form of a printed report, or in punched card form for further processing.

Blue Cross opens wire network

Blue Cross hospital service inaugurated an international private wire communication service last month to speed admission reports of patients hospitalized away from their home cities, and to carry other inter-city reports between local Blue Cross Plans in 86 cities in this country and Canada.

The system, according to association officials, is expected to lead to greater use of electronic data processing techniques in local Blue Cross plans.

Royal McBee Corporation last month announced a new machine for automatic data processing—the Keysort Tabulating Punch, a new adding-printing punch which automatically punches and tabulates quantities and amounts on Keysort cards. Data are entered from a 10-key adding machine keyboard, being simultaneously code-punched in the Keysort card, and accumulated in the machine. After the cards have been sorted into desired classifications, they are tabulated by the same machine, which senses the quantities or amounts, and automatically adds, non-adds, or subtracts, as required, printing results on the detail tape.

In Short—

Survey spots computer market at nearly $7,000,000,000 annually

The computer market in the United States during the next five years will be "between four and seven and one-half billion dollars," according to a survey recently conducted by *Computers and Automation,* trade magazine specializing in computers, computing systems and components. Ten per cent of the readers of the magazine were surveyed, and among the several hundred replies were more than 80 companies which plan computer expenditures of $1,000,000 or more. Fifteen of these companies expect to spend $10,000,000 or more.

Operating businesses expected to approach six million by 1975

Correlation of three rates of growth — estimates of the total number of U. S. businesses, population censuses, and the Dun & Bradstreet Reference Book — have projected an anticipated 5,750,000 business concerns in operation 18 years from now. A recent issue of *Dun's Review and Modern Industry* carried the detailed projection and supporting evidence prepared by Dr. Ralph J. Watkins, director of research for Dun & Bradstreet. The anticipated business growth, linked to today's population upsurge, was predicted to reach 4,500,000 concerns by 1960; 4,900,000 by 1965; 5,250,000 by 1970, and 5,750,000 by 1975.

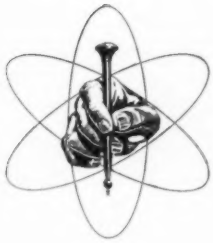
WORK SMARTER...NOT HARDER!

Electronic Longhand

CHANGES MADNESS TO METHOD...
DELIVERS DATA INSTANTLY, IN LONGHAND!

Old methods are rapidly changing in systems and procedures. And Electronic Longhand is making the change... helping many businessmen to "Work Smarter, Not Harder."

This TelAutograph* telescriber system delivers data in longhand — instantly, electronically, to near or far — with copies for all concerned. Brochure tells all about it... how Electronic Longhand saves time, improves operations, prevents errors, reduces cost. Send coupon below and you'll start working smarter by return mail.



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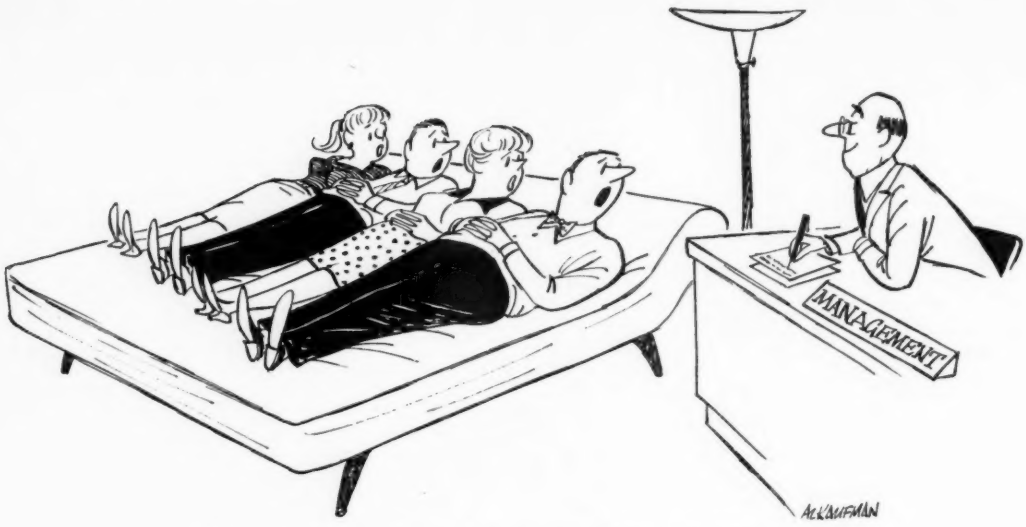


Paternalistic measures *can* be carried too far, but some degree of individual consideration is essential on management's part

Does management create its problem employees?

by Clarence G. Scholtz
Office Manager, Employers Liability Assurance Corp., Ltd., Philadelphia

OFTEN today we hear executives, managers, department heads and supervisors make such statements as "Employees are not what they used to be"—"Employees want to do as little work as possible and receive as much pay as possible"—"What has gotten into the present generation"—"Now we give them coffee breaks, still they are not satisfied"—"I must have all the problem employees in my outfit" —"I pity the poor personnel and office managers with all these problem employees", etc.

What problem employees? Who are the problem employees? How do you handle these problem employees?

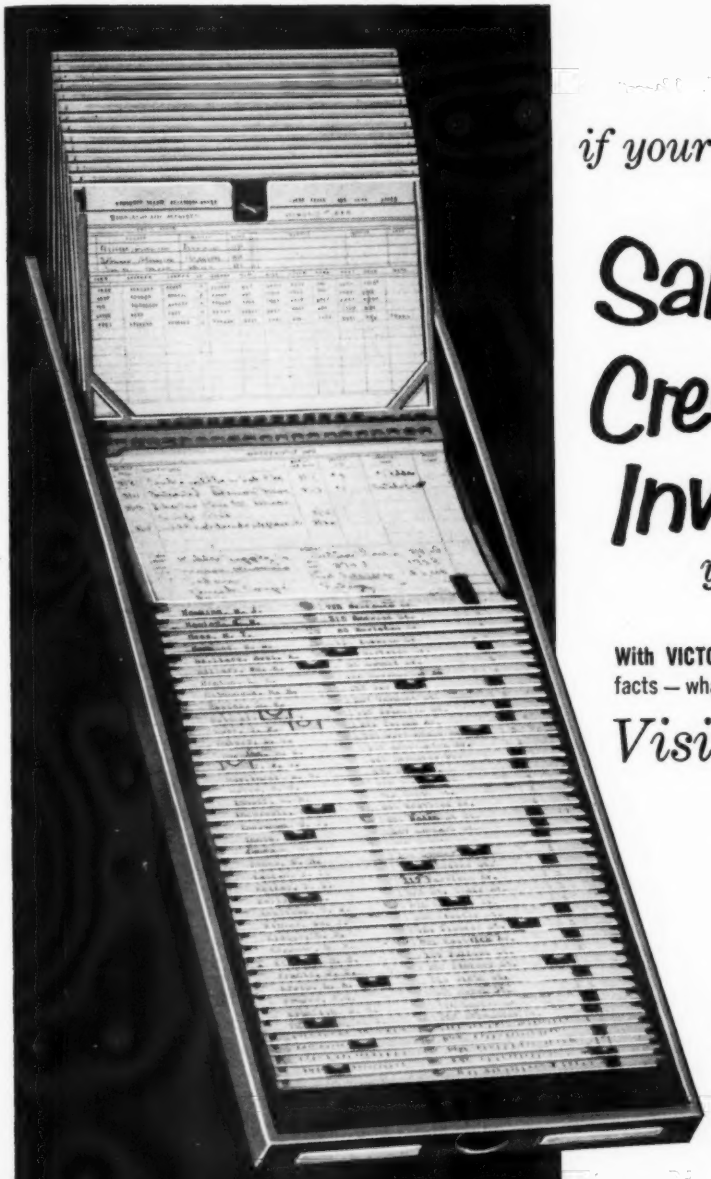
This takes a bit of analysis. What is meant by such remarks concerning so called problem employees? Are we to conclude that any employee who does not kill himself or herself working is a problem? Must we assume that any employee who at any time makes a remark that is only slightly critical of some policy of a company is a problem? Is it necessary to assume that any employee who voices an opinion of a company's wage scale is a problem employee? Is every employee who objects to seating arrangements, type of work, lighting, heat, hours of work, amount of work, etc., to be considered a problem?

If the answer to the above is "Yes" actually what employees do you have left, for practically every employee, even those who later become managers and presidents, has at some time or other voiced any one or all of the above remarks.

My experience has been that there are very few employees who are genuine problems if the supervisors, department heads, etc., will but give the matter sufficent and careful study. After 36 years of observation, I am still of the opinion that the overwhelming majority of employees are loyal, conservative, ambitious, intelligent and only waiting for the opportunity to prove to their superiors their willingness to assume responsibility and their desire to help solve the multitudinous problems arising every day.

If we on Management's side of the picture are only able to look on employees as problems and not as possible future leaders of our business then the

Many youngsters today expect to rise to the top in a matter of a few years; their inevitable disillusionment can create problems.



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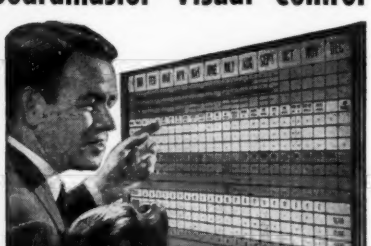

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brutal fact is we should not be a part of management.

How many times do we see extensive educational programs put on by large organizations in the white collar field which are the last word in technical and procedure instructions, but omit any reference to personnel problems and how to handle them. In other words men are chosen to head offices, departments and units on the basis of their technical knowledge only, with no regard for their ability to teach others that same knowledge or their knack for diplomatically handling or getting along with others—whether customers, associates of equal rank, superiors or the rank and file. The one most important qualification is overlooked entirely. That can produce problem employees.

How many times do we see good fellows promoted to executive positions and promptly they become strangers; they learn to live in ivory towers; they no longer associate with their old pals in the office, they are now the boss, they forget how the business world looked to them when they were numbered amongst the rank and file; they forget how they criticized their boss when the shoe was on the other foot. Now everyone should and must conform to their opinions, no one should criticize, no one should doubt their correctness, ability and superiority. Carry this to its ultimate end and you have dissatisfaction, dissension and, among the older members of the office staff, problem employees.

Another bad factor is to have the boss, or the organization, changing signals frequently so that no one seems to know where he is going. Nothing can so quickly destroy morale, reduce productiveness, and create chaos as inconsistency in orders coming down from the front office. Employees who are kept consistently bewildered by management's inconsistency may well develop into problem employees.

Lack of communication between management and employees often causes problem employees. When one employee is promoted to a new assignment or advanced over the heads of longer term employees with no explanation from headquarters as to why this was necessary, those left behind naturally make up their own explanation and in the majority of cases that is not good; generally all excuses but the right one are used. An explanation, even if difficult to give, should in every case be given to all concerned.

Constant pressure from above to get things done with no apparent official acknowledgment of a good job well done can in many instances produce a resistance to all official orders. In the majority of cases this resistance is not only unintentional but is not recognized by the employees themselves; it is a psychological reaction. It can lead to problem employees.

We must remember today we cannot use the same theories, demands, procedures, or methods as we did 25 or 30 years ago in our relationship either with new employees or our older employees. Times have changed, they will never go back. The so-called coffee hour (which is not an hour) has become an American institution, yet can you imagine an executive of 1920, say, permitting employees to have a coffee break with pay? Such an idea would have stamped that executive as a wild-eyed radical. Yet today if you don't permit it, you may find it difficult to attract personnel.

Many offices employing white collar workers today operate on a 36 or 37 hour work week. Can you imagine the owner of a business in the early 1900's allowing his employees to work less than 45 to 48 hours?

Can you find anywhere today a successful chief executive who boasts of how low a salary he pays his staff? Everyone strives to keep abreast of the going wage scale in his type of business. If he does not he surely will have some really dissatisfied workers —and very shortly no workers at all.

One factor we cannot overlook is age. When we employ young workers they generally have long range views; they expect to be somebody as soon as possible; they think in terms of promotion, receiving salary increases, becoming executives and making a name for themselves in the business world. Some do but the majority do not reach the goal of their dreams. It frequently is many years before they finally realize their dreams will never come true, so much later that they cannot switch companies, change the type of business they are in or even go into the new businesses that constantly spring up in this fast-paced era we live in. They may become problem employees when their ambition is gone and they realize they are at the end of the line with no place to go. (*To page 76*)

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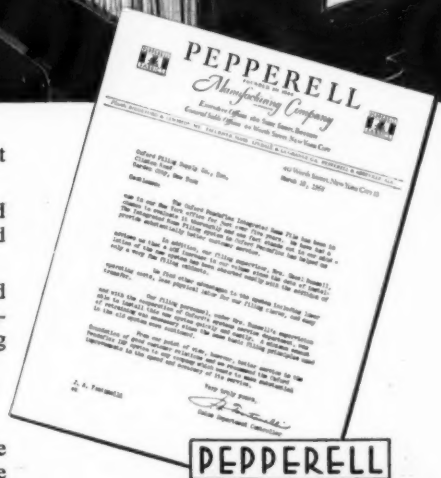

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Yet a filing supervisor and two file clerks had time only for sorting and filing. Phone clerks and correspondents from the customer service department had to make their own look-ups, crowding aisles, occasionally losing papers, and generally wasting everyone's time.

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Older workers are more inclined to stick to the job than their juniors

Don't overlook the older worker in today's tight labor market

Experience of firms that are employing older workers indicates many common prejudices against them are not based on fact, and that they offer many advantages—

by Robley D. Stevens
Management Consultant, Washington, D. C.

OBVIOUSLY, the problem of finding competent office workers is by no means a new one. But many of you are now faced with the task for the first time. You have scouted around to locate well-trained and *experienced* office workers. You have a fairly good idea of the kind of office workers—accountants, general clerks, stenographers and typists, machine operators, etc. —that you need to solve your shortage of manpower. The problem is there and will be for many years to come, according to a survey made by the U. S. Chamber of Commerce as well as the Federal Government. Consequently, you should be prepared to face it in the future as well as the present.

Should you hire office workers over 55? Now is a good time to consider the matter realistically. Not later on when your office is in dire need of experienced workers. The fact remains that your office can utilize older workers because this group provides one of the best personnel sources.

Some people cling to the old notion that older workers cannot be developed. Yet, too much emphasis cannot be laid on the fact that one office worker may be mentally and physically *old* at twenty or thirty, while another is still *young*, vigorous and forward looking at sixty-five. On the contrary, you should realize that millions of the best executives employed today in private industry and in government agencies are "older workers."

Most office administrators, if asked what makes a competent worker, would probably reply, intellect, will and experience, as well as judgment—all of which grows out of *experience*.

An objective appraisal of utilizing older workers in your office is one of the best, and certainly one of the first steps you should take to determine how beneficial they can be to you. Here are some of the many reasons why your office should utilize older workers:

Older office workers are more inclined to stay on the job. They are loyal to their employer. They tend to be much less demanding, and more appreciative of their wages and working conditions. This alone can lead to less personnel turnover and less absenteeism.

Older office workers have an advantage of greater experience in performing their jobs as well as adapting themselves in handling assignments. Their abilities tend to improve with age and experience.

Older office workers realize the need of self-control to preserve their self-respect. They are often more painstaking, accurate and know how to exercise tact when dealing with other people.

Older office workers are usually more careful and take fewer risks than others. They strive to practice greater safety while working on the job.

Older office workers are usually slow to anger and avoid the expression of annoyance over petty things. They know the importance of paying strict attention to details.

Older office workers often need less supervision than others. This is advantageous to the office administrator who is extremely busy and unable to give continual close supervision to anybody.

Older office workers usually think clearly and concisely about business and its problems. They are usually skillful with dealing with people. They are better adjusted to their jobs as a result of their experience.

Acceptance growing since war

Since the end of World War II, employers have come to realize the advantages of utilizing older workers. Even more impressive is the fact that there are over three million people over age 65 working in a wide range of occupations, and this represents only a small percentage of all older workers who can be utilized by office management.

If your office management adopts a policy of employing workers regardless of age, and also in utilizing older workers, it can take an important step in hiring and placing them.

Many older office workers, not now employed, and of fair intelligence can, with a little observation and experience, learn the art of handling almost any office job.

Office workers have one advantage over many other kinds of commercial workers. Age is not necessarily a bar to continued success; indeed age is an asset so long as the older worker is healthy, and his mind remains alert and elastic. It is not uncommon to find successful office executives of 65 and over. The continual contact with the active life of office management and with the multitude of ever changing personalities therein helps to keep a man young.

If you are going to hire older workers, you will save a lot of time and effort by picking those who are competent and experienced. You do not need a trained staff of aptitude testers, psychologists, or a battery of personnel aids to know a good one when you have him. Good old fashioned common sense and a thorough interview can still do the job.

How can you, the average office administrator, get your share of promising, competent and experienced older workers?

Two sources for recruiting older office workers include the private and the state employment services. By matching an older worker's qualifications and experience with your needs, you can help find the right kind of employee for your office.

Young office workers no longer hunt jobs. Jobs hunt them. With older workers, the situation is different. They will come after the job—if they know they have a chance.

Emphasize, and broadcast your company's interest in utilizing older office workers. But don't expect a genius. The average, and above average office worker is good enough material to work with. Investigate the applicant's home and work experience for evidence of good mental adjustment, and liking for people.

Actual office training of older workers is a cinch to figure out. For instance, you can use the day-to-day coaching and group meetings technique right in your office, to see that older workers do the job assigned them according to your needs.

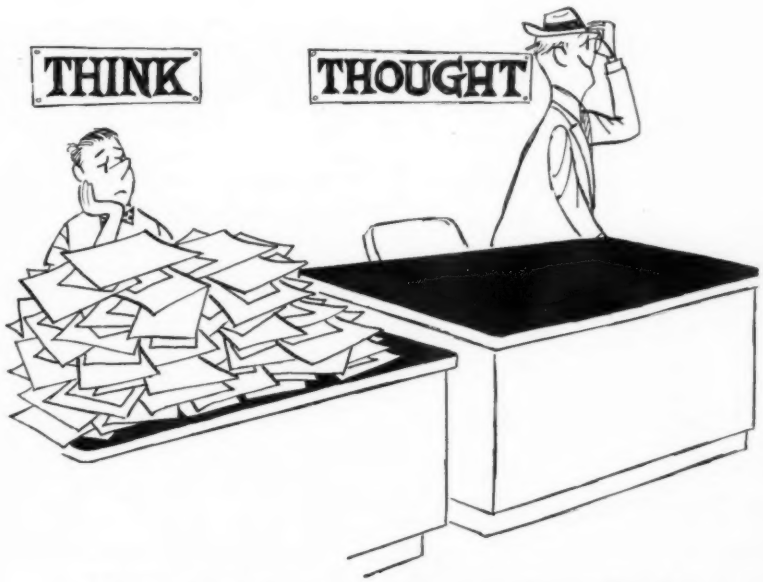
Rewards motivate interest. They never fail if they are the right ones. To older workers this means, "the better job, the sweeter the reward." Reward them with office tasks that give them a chance to show their improvement. Let them take some of the load off your back, and give you more time for analysis and action on overall office management problems.

What will be the manpower problem in your office by 1960? Will you be able to secure sufficient well-trained and experienced workers to meet your demands?

Greater utilization of automation and electric computers in the office will accentuate the need for more trained and experienced workers. A start in securing and utilizing older office workers has been made, but your office management probably should be thinking about this problem at this time.

The shortage of office manpower is a result of a number of factors. What really matters is that a shortage exists and is likely to continue for years to come.

On the other hand, utilizing older office workers now and in the years to come is desirable from many viewpoints. The problem is to get them and to keep them in the office labor force.



Value of the older worker's experience is often overlooked

Many things in office management today indicate that older workers' knowledge can help reduce operating costs, improve employee efficiency and morale. The larger your office, the more you need manpower. In this seller's market for young people's talent, they aren't likely to come to your office for a job. It seems that you will have to go after them and sell them on the idea that working in your office is worthwhile. Then, when you have them in this cold-war age, the problem of military service is unavoidable, for 75 per cent of the young men in the country face such service, thus leaving you without adequate manpower to run your office.

In line with your long-range office management planning for personnel, don't overlook the possibility of hiring older workers who are on a pension, and especially those who want and need part-time work. In fact, this source can be one of the most fruitful means of recruiting many well-trained and experienced workers who are willing to do a job in your office.

How you go about solving this problem depends upon you. The above suggestions are an important sampling of the many things an office administrator should consider when utilizing older workers. It's not the simplest negotiation. But there is no excuse for a manpower shortage in your office if you hire well-trained and experienced older workers. In so doing, you'll probably end up with less turnover, more efficiency and productive office workers.

Employees—

(*From page 72*)

Why do employees have the ideas they do have? Ideas that raise older management men's eyebrows— and sometimes their blood pressure. We can blame to some extent the radio, television, newspapers, magazines and, last but not least, many of our schools. These avenues of communication and learning create an atmosphere of theory rather than practicality when it comes to business dealings: the result is that boys just graduated expect to be executives in a matter of months not years. Girls expect to receive salaries equal to old-time, hard-working, long term employees. When in a short space of time these individuals find out all this will not come to pass as expected, some react with a mental depression—and become problem employees.

Now to summarize: What should management do to prevent problem employees?

Rule number one, of course, is—don't hire any!

If members of your staff revert to a problem pattern, determine whether it is management's fault by checking to see:

1. If there is a failure on management's part to understand the desires of today's employees.
2. A failure to provide proper personnel features in education programs within the company structure.
3. An attitude of arrogance on the part of newly promoted officials.
4. Constant changing of instructions —a consistent pattern of inconsistent orders.
5. Lack of communication between management and workers.
6. Constant pressure without acknowledgment of good work.
7. Failure of superiors to understand effect of outside bad luck—sickness, death, financial troubles—on employee.
8. Failure to give employee who dislikes present position a chance at more congenial work.
9. Failure to pay the going salary rate.

The other side of the coin, of course, is what employees should do to avoid becoming problems. They should:

1. Attempt to learn all about the position to which they are assigned.
2. Take advantage of all the educational facilities offered by the company.
3. Realize that management has a legion of problems, and cannot always give priority to the ones they refer on to higher authority.

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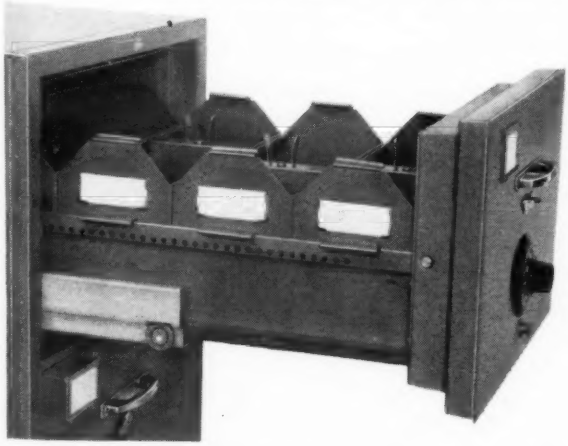

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4. Be realistic about their promotions, and not expect to make general manager within a few years of entering the company.

5. Expect to earn their raises, to assume more responsibility for each increase in salary.

And management has every right to expect that good employees will meet these standards.

There are still individual circumstances, in which an employee who has been completely satisfactory for a long period of service suddenly begins to present problems to management. Such people must be handled on an individual basis, taking into account the circumstances that create the problem.

For instance, one office had an older employee who was slowing down and not giving her work the attention it required. Another employee had to be assigned to help her complete her work, and naturally this increased expenses. The personnel department transferred her to a position where the pressure was not so high; she was happy, and the company was able to cover her old job with one employee again.

In still another case, an older employee had a heart attack, and was told he could no longer work a full day. The company carried him at full salary, while still permitting him the shorter working hours his health demanded, as his medical expenses could not otherwise have been met. It may look like bad economics at first—but the company created good morale throughout its entire staff by its action, and good morale is not easily purchased.

Imagination and a little thought can not only solve most "problem employee" situations; they can also very often turn a routine employee into an outstanding one. One office that achieved this had one man who was doing satisfactory work, but hadn't proved to be either a genius or a human dynamo. The company sent him to take an educational course, and immediately assigned him to a more responsible position after his completion of the course. For this particular employee the faith management showed in him served as a new lease on life, so to speak. Today, he's one of the company's excellent executives.

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Operations research—

(*From page* 34)

termined by the facilities available. Hence the classic problem: how to use the facilities in the most profitable manner to produce the most profitable proportion of each item.

It would be most unusual to be able to concentrate on the highest-profit lines to the exclusion of the rest: yet even if there are only a dozen or so items or variants of them in the range, and only half-a-dozen processes, the permutations and combinations of possible production plans run into an enormous variety — quite impractical to work through to the "expected profit" stage in accurate detail by conventional methods.

None the less, the methods brought into prominence by the increasing volume of experience with electronic computers, can be used to calculate readily the expected profit based on the fullest possible use of the facilities available and the most profitable combination of products which can result. The technique — "linear programming"— is of course most fully applicable through the use of a computer (or rented computer facilities). But it does not necessarily involve the use of a computer: short-cuts have been and are being worked out on a mathematical basis, to get results many times more reliable than even the best-informed estimates, and without the enormous volume of computations normally associated with this type of problem.

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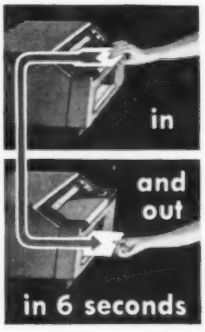

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Perhaps the "ideal" production plan cannot be accepted: it may not fit a balanced sales program. But the same techniques that set up the first plan can be used to modify it as necessary; and once the proposed plan is worked out, how much easier it is for management to secure the willing co-operation of both Sales and Production. Each side knows that its needs have been impartially weighed, mathematically, and that the probable results of the many possible courses of action have been considered. There can be no doubts as to whether the executive who made the final decision was perhaps a bit prejudiced in favor of Sales because he came up through the Sales side, or favored Production because he had an engineering training.

The example we have been looking at is over-simplified, of course. We have not considered the time factor: some parts of the production may have to be ready for sale earlier than others. Some facilities or materials may not be uniformly available all the time. But the methods that apply to the general plan can be expanded to take care of the complications, and already are being employed with increasing success in many places.

Then again, we mentioned that perhaps the ideal production plan did not fit a balanced sales program, even if it took into account as many as possible of the product modifications Sales might ask.

Another approach, similar to the one we have described, can bring an increased degree of automation to this management problem, too. Based on past data, the probability of future results of a certain kind can be measured. For example, the odds that a certain percentage advantage in price over a competing product will result in an increase of sales within specified maximum and minimum limits; and the different odds for different price margins.

This is a far cry from formulating a mathematically certain sales program: but it can change a plain risk into a very exactly calculated risk—very exactly calculated at least as far as every known factor is concerned; and this is a good deal more than can be said for the methods on which management has had to rely too often in the past.

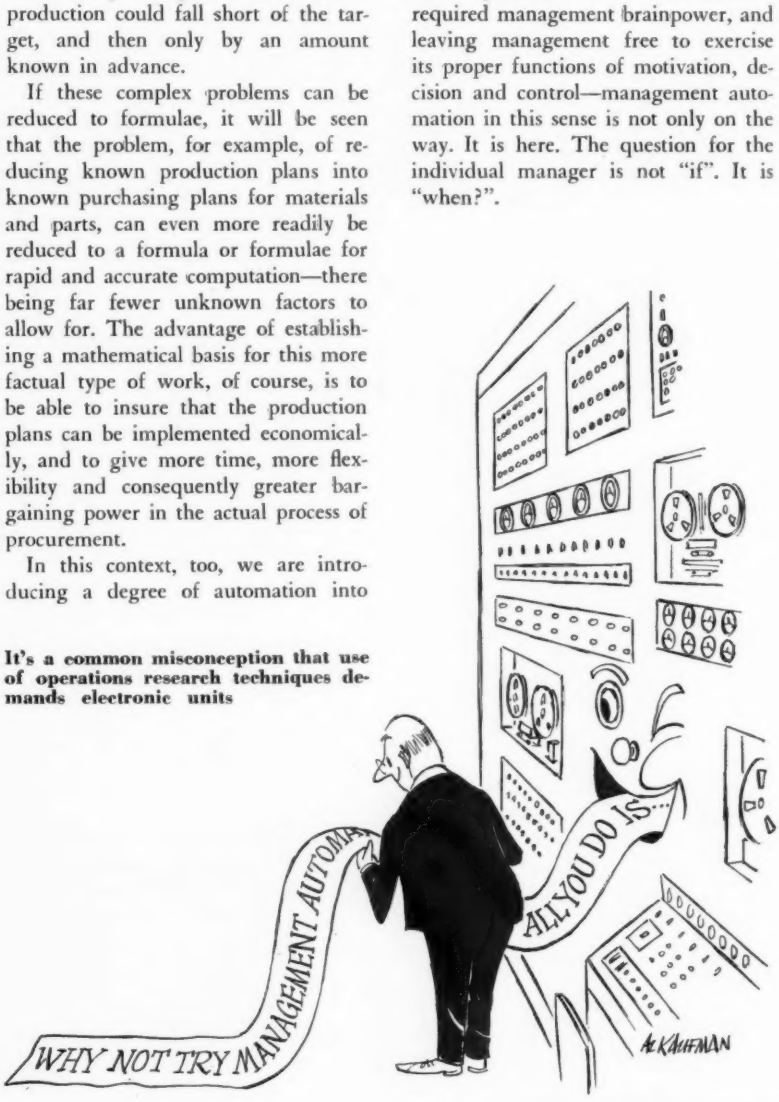
To come to the next level of planning we originally considered: the utilization of productive capacity. Not many industries are without very accurate information on the percentage utilization and down time that can be expected from their manufacturing or service equipment. Nevertheless, unexpected production delays do happen, and too often it takes bitter experience to ascertain how a delay at one point in a process can build up into much greater delay as the effect passes on through the remaining stages of the procedure.

Here again, mathematical formulae have recently been much more widely applied than in the past, to calculate and allow provision to be made in advance for the normal incidence of delays at random times and at random points in the procedure. Once more, there is a firm basis for planning—based on the scientific knowledge that there is only a certain limited risk, agreed upon in advance, that production could fall short of the target, and then only by an amount known in advance.

If these complex problems can be reduced to formulae, it will be seen that the problem, for example, of reducing known production plans into known purchasing plans for materials and parts, can even more readily be reduced to a formula or formulae for rapid and accurate computation—there being far fewer unknown factors to allow for. The advantage of establishing a mathematical basis for this more factual type of work, of course, is to be able to insure that the production plans can be implemented economically, and to give more time, more flexibility and consequently greater bargaining power in the actual process of procurement.

In this context, too, we are introducing a degree of automation into another branch of management—the procurement side. Again, the purpose is not in any way to alter the responsibility or importance of the managers concerned: but to give them a tool for more effective and less anxious operation. It is hardly necessary to add that the logical progression from purchasing is to inventory control. The advantages of a scientific approach here were appreciated perhaps earlier than in the other fields we have glanced at; and the success of the scientific approach in reducing delays for lack of materials and in reducing inventory investment, is a signpost to the success the same approach can give in wider applications. Not only "can give": in many companies "is giving".

Managerial automation — in the sense of reducing to a routine many of the problems which have hitherto required management brainpower, and leaving management free to exercise its proper functions of motivation, decision and control—management automation in this sense is not only on the way. It is here. The question for the individual manager is not "if". It is "when?".



It's a common misconception that use of operations research techniques demands electronic units

Management—

(*From page 22*)

training entails some difficulties for the organization no one denies. It is likely to be looked on by the colleagues of the one chosen for inclusion in the potential executive group as favoritism—particularly if the choice is made early in his career with the company so that he is necessarily denoted as one of a "select" group over other employees who have been with the company for a longer time. But the whole concept of management development programs—at least as they relate to training for top positions—runs counter to the theory of promotion by seniority. Or it seems to. Actually, in the real sense, inclusion in a management development group does not necessarily imply immediate promotion at all. It implies instead inclusion in a general group from which will be selected the particular individuals who will attain the top positions in the company eventually, and special nurturing of that group so it is prepared for such assignments. As the individuals in the group move up in normal sequence through the company, their numbers will inevitably be narrowed down. Some will go so far and prove incapable of going further. But the concept—the concept of a group of qualified men and women which serves as a pool of executive replacements for upper echelon positions will still prove valid if a sufficient number of people to staff the top managerial posts of the company are developed.

Obviously, however, inclusion in such a group must be based, for those not automatically selected for the group before they come with the company, on a consistent and well understood system of selection, based on performance analysis by superiors, and evidence of the qualifications considered essential to the executive function. Otherwise, the office will be handicapped by jealousies and prejudices.

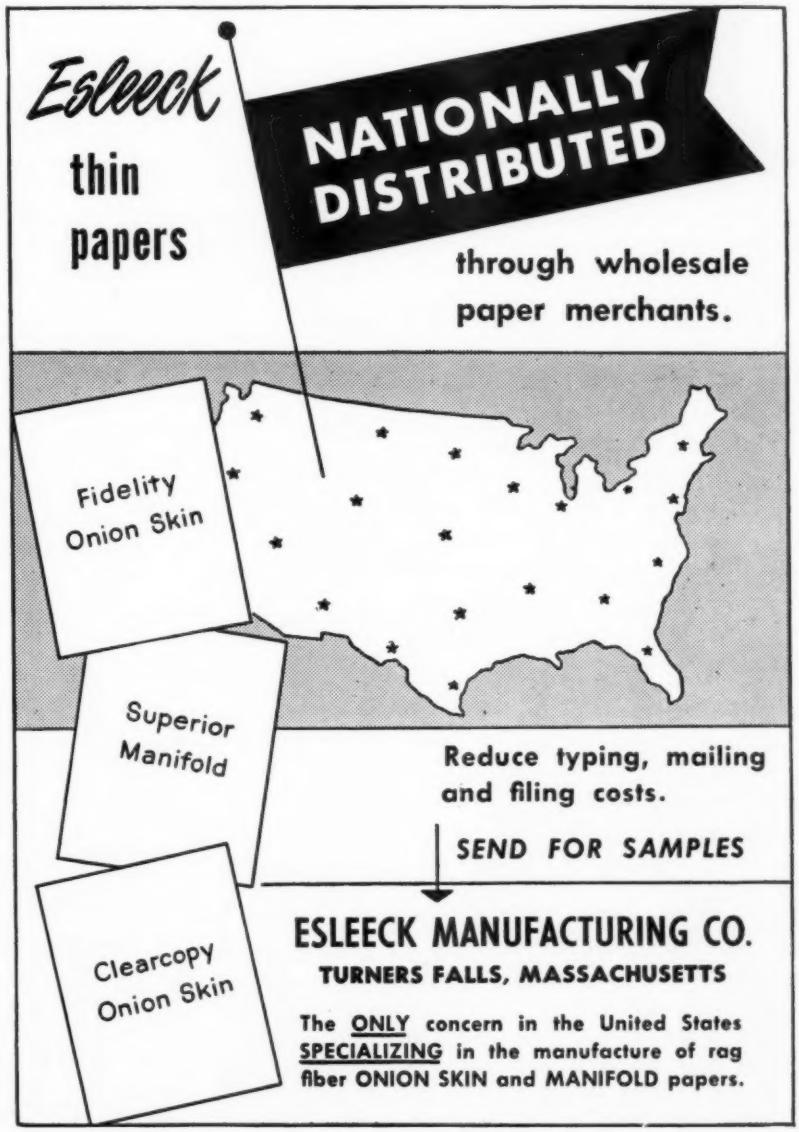
Once the executive training cadre is created either by direct recruitment or selection from young employees already with the company, most successful training programs, even though differing vastly in detail, show a great similarity in principles. Moreover, although formal executive training programs to date have mostly been pioneered by large corporations, the principles that have been found most important are equally applicable in small and medium-sized organizations.

On-the-job training techniques

Assume that a pool of potential talent has been created covering people working in a number of departments of the firm, and that the firm decides to deliberately prepare those people so that the best among them will eventually be able to move into key management spots when replacements are needed. What are some of the techniques of on-the-job training to which they are exposed?

One is assignment to executive responsibility during absence of the executive normally responsible for the function. Thus, when one of the "trainees" is assigned to a department he may, in time of the department chief's absence, be given responsibility for running the department. This, of course, also presents problems both of morale, and of the trainee's having enough experience to handle the job. For that reason, many companies try whenever possible to assign their trainees to the various departments through which they are rotated on a staff, or "assistant to-" basis, so that they gain familiarity with the work and responsibilities of the entire department quickly, and are logical replacements for the chief executive whenever he is absent.

In either event, it is considered es-



sential that the executive trainee as he enters the department be considered as an executive trainee not in terms of favoritism in his job performance, but in terms of special attention from his superior — special assignments which are particularly demanding, and instructive, close analysis of his mistakes and weaknesses. His peculiar status, in other words, is recognized not through pampering, but through more rigorous demands than are made of the average employee in the department and expectation of a higher standard of performance, initiative, and accomplishment.

This type of training by challenge and demand is based on the company's using job rotation as an integral part of its management development plan. Job rotation is considered by most companies the best way to acquaint the trainee with the functions of every part of the company as quickly as possible, give him the broadest possible base for future responsibility. It has disadvantages if it is carried through too quickly; he learns a little bit about a lot of things, but not a great deal about any one of them. Moreover, it's an expensive process, in that much of the trainee's salary is actually being paid out for work which he's always learning to do, not for work which he's already accomplishing; shortly after he's well enough acquainted with the department to be extremely capable in it, he's shifted to another assignment.

Pros and cons of rotation

The solution here would seem to be a better and more analytical approach by management to the time the trainee spends in each department. If the advice of the experts is followed, and selection for management training is made at the beginning of a man's career with the company, there should be no reason why his period of work in any one department of the company could not be long enough to enable him to become a valuable member of that department. To carry through with the service comparison which Urwick suggests, the average military officer spends two or three years in most assignments outside of attendance at service schools.

There is of course the factor that after two or three years in one department where he has established himself as a valuable person, and has achieved a certain salary rating, the trainee, on movement to another department will be at a salary level which his value to the second department may not justify. Most large corporations accept this as a necessary expense in getting an adequate executive replacement pool: whether small corporations can afford to take the same viewpoint is a moot point. However, even for the smaller corporation there are certain factors operating which make job rotation worth considering. The smaller corporation usually needs a far smaller executive replacement pool than the large. Moreover, it is in a position to weed out those people who are not going to make the long pull much faster than is the large company. Thus, it can carry on with a much smaller pool, both in absolute numbers, and in terms of comparison with total executive strength. Moreover, even though incoming trainees may earn a salary which their experience does not justify directly in terms of the new department's work, they are also bringing a knowledge of another department's work which can prove valuable in improving liaison and work flow between the two.

Thus, the smaller corporation too may find job rotation extremely val-

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uable as a training device, if it operates with a smaller pool, if it keeps its trainees in each department long enough so they become valuable members of the group, and particularly if it handles its rotations in such a way that trainees are moved from one department to a closely related department in sequence. In this way they can learn the new ropes as quickly as possible; also they can benefit the work of the new department with their knowledge of the functions and needs of the old, but related department.

Another area in which companies are beginning to experiment is exposure of the trainee, after some indoctrination through job rotation, to daily contact with the very top officials of the company through some kind of staff position at the main office. This again, in a service analogy, is comparable to the developing officer's tour of duties on the general staff of some command. It does not preclude his subsequent assignment to some line department. But it is argued that only through some exposure to top management somewhere along the line, rather than somewhere near the end of it, can the potential executive learn the actual day-by-day responsibilities and functions of the top echelon.

Throughout, the primary responsibility is on the candidate himself. His own job performance, carefully rated in each of the successive jobs which he holds in the company, is the key to whether or not he remains in the promotable group or stops somewhere along the line. Thus, under this management training principle the executive development group is constantly growing smaller as it grows older, even though the incoming groups starting at the bottom of the ladder are still large. But the net result of the program, if it has been carried through successfully, is a hard core of men qualified for top positions. As such positions open, the one best qualified man can be selected from the replacement group. And the company always has a backlog of experienced personnel, so that any given position can be filled well.

This basic outline of the main features of management development programs has not mentioned any formal training program in the sense of attendance at classes or universities. These are a feature of some plans, are not included in others. But they seem to be considered secondary factors in almost all plans. Indeed some companies seem to emphasize the trainee's teaching an indoctrination course of some kind to subsequent trainees as far more important in his preparation than his own earlier attendance at a similar course. The theory here is that the experience has two-fold value: the best way to learn a subject is to teach it to others; one of the most important requirements of an executive is the ability to impart information and directions to others.

Other peripheral activities include assignment of trainees to working committees created to solve some problem affecting the business as a whole, where their experience can be merged with the experience of their opposite numbers from other departments, to the mutual benefit of all, and where higher echelons in the company can also benefit from the solution the younger group finds; attendance at industry conferences, and suggested reading.

Each company that has pursued an

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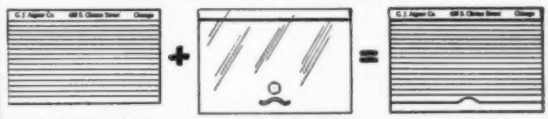

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executive development program has followed a different pattern. One of the few firmly established truisms about such courses is that they must be to a degree tailor-made, that principles can be adapted, but never detailed programs. However, it is obvious from the main features that distinguish the majority of programs that some phases are universal, and that the care with which these phases are carried out to a large degree determines the effectiveness of the program.

Performance ratings for trainees

Thus, it is almost universally acknowledged that performance on the job—on each successive job—is the main criterion for continued travel upward in the executive hierarchy. Yet job performance must be rated not just as job performance would be for a routine employee who is not expected to move upward indefinitely in the company, but on that basis *and* on the basis of the continuing development in the trainee of the individual characteristics that are thought of as essential to the successful top level executive.

Some type of fairly thorough and searching performance evaluation scheme, therefore, is almost invariably a cornerstone of a good management development program. This will sometimes take the form of a regular job rating, but more often will be an all-around appraisal, covering not only how well a man has done a particular job assignment, but how well he has done the assignment in terms of what are considered his own special abilities and potential.

The "appraisal" is sometimes carried out by the man's immediate superior, sometimes by a group composed of the immediate superior, and two or more other superiors who have had an opportunity to judge him on the particular job. Sometimes, it is carried out by his colleagues, and in a few rare instances by those who have worked under him. In many instances, it is quite detailed: U.S. Rubber for instance uses a form in which candidates are appraised on six different characteristics: Acceptability; Analyzing; Leadership; Making Decisions; Organizing Ability; and Responsibility. Under each of these headings, the appraisers are given a list of five statements. The statements range from a description of a person very weak in the particular characteristic to a description of a person having a high degree of the quality. The appraisers are required to check the line most descriptive of the man being analyzed.

The form also asks the appraiser to state what he considers to be the candidate's strongest management characteristic, and the areas in which he requires improvement in management ability.

Such appraisals, when completed, are discussed with the man concerned (this is characteristic of most appraisal plans used in management development programs) so that he may learn where his

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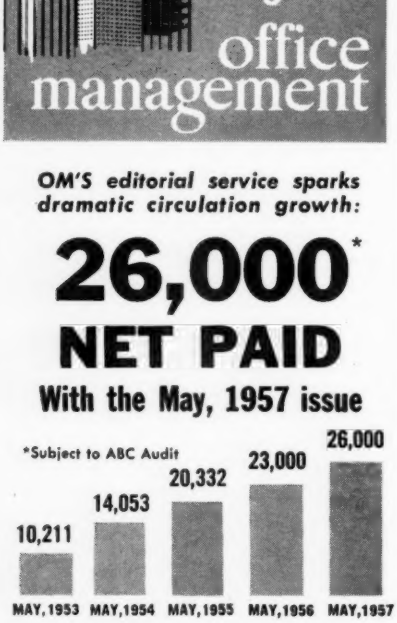

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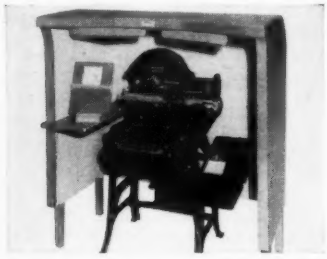

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weak spots lie, and work out with his superiors measures to improve his performance in these areas.

To a degree, of course, management development programs are the wheel come full circle: they represent a deliberate recreation in a large modern company of a process which existed almost instinctively in the small, closely held company of another era: the early selection of the most promising candidates for high responsibility, and their coaching on the job for such responsibility, as well as their exposure to as many facets of the whole business as was possible. It could almost be likened to the process by which the boss's son of legend was started in the factory to learn the business from the ground up. In the modern giant corporation, people of promise are picked to learn the business under special conditions of tutelage, thus insuring a continuity of business management just as training the new generation prepared the family-held concern to continue functioning in the past.

This similiarity once recognized, much of the mystery that presently surrounds "management development" tends to disappear. It can be an elaborate, formal process, or a highly informal one—that depends on the company, its size, and its way of doing things. The most important thing is that there be some kind of system which selects, on an impartial basis, and that trains on some sort of consistent basis. If those two conditions are met, the relative formality or informality of the program seems to be not too important.

Firm principles, flexible plans

Thus, any company which is interested in creating an executive replacement pool has a wide range of options. It can start with the simplest of programs stated in the most general of terms, and then refine it as it gains experience. If the basic characteristics of successful programs are kept in mind, results will almost invariably be good. They will not necessarily be perfect, not necessarily as good as they might be, if a more carefully and meticulously designed plan were used, but they will usually produce a better group of managers than no plan at all.

Moreover, one of the almost invariable by-products of management development programs has been an improvement in performance at all managerial levels. This is a by-product mainly because management development programs were usually designed to furnish an executive replacement pool, rather than to tone up managerial performance throughout the organization. However, this secondary effect has been so common following introduction of a development plan that many companies now consider it equally important to the creation of the pool.

Basically, then, a management development program is not only definitely feasible for every company—even the one small enough to build its program entirely on recognition of its most promising employees, and insurance that those employees are given the most thorough training possible by each of their supervisors, and are exposed to situations where they can demonstrate just how much executive calibre they possess. It is also of immediate, as well as of long range, benefit to the company. A consistent management development program, in other words, is "money in the bank" for the present—and sound insurance for the future.

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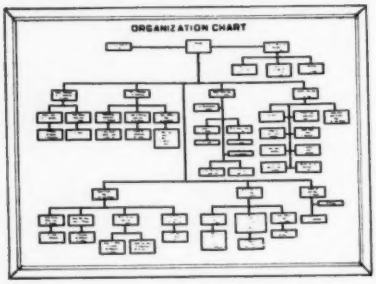

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Centralized office—

(*From page* 30)

The "Executive Suite," containing the offices of J. W. and A. J. Alsdorf, is located at the opposite end of the building from the lobby. J. W. Alsdorf serves as president of the corporation.

The interior office area is distinguished by inclusion of the latest trends in layout and furnishings. The corridor separating the showrooms from the offices of the vice presidents, for example, is a wide area, featuring a floor of black and white tile and a wall of soft yellow on one side. The showrooms themselves, divided into private rooms by use of floor-to-ceiling glass partitions, feature white walls and walnut enclosures for display purposes. An informal atmosphere is carried out in these rooms with use of black-covered chairs and white marble coffee tables. Glass sliding partition doors connect one showroom to the next.

Color used generously

The general clerical area is a huge room, well-lighted and notable for its full utilization of spatial distribution to accommodate a large number of desks and files. Supporting steel columns are painted yellow; side walls, grey green. The 11 glass-partitioned offices, for use by officials of the companies, adjoin this area and feature rims painted a dark green.

The reception area, of green verde marble, buff brick green terrazzo floor and glass walls, makes a practical and simple design for a much-used lobby. The switchboard-receptionists are located in an alcove bordering the reception room.

Mr. Alsdorf's President's Office includes both an informal conference area and the desk area. The color scheme here is a variety of tones of beige, with the single exception of the Bernadotte chairs, which are of bright lacquer red. The beige Puerto Rican carpet is inlaid in walnut planking, and the portion of the floor showing beneath the desk is of matching walnut edged in brass.

A company coffee room features a mural which, depicting an "outdoor" scene, helps brighten and "open" this interior room. A color combination of beige, brown and coral is followed throughout.

The square-shaped structure is built on a 20-foot module, with a 10-foot clear ceiling height. Its exterior, which is of glass, steel and beige Roman brick, is dominated on the west side by a steel tower, housing the air intake facilities and the furnace stack. The east side of this tower features a surface of green glass which, when illuminated, emblazons the company's name. The front of the building is dominated on the left by white steel columns and a white steel canopy which juts over the drive. A white trim borders the entire structure.

Area of the main floor is 23,726 square feet; the basement contains 3,451 square feet. Cost of construction, including interior and "special" treatments, was approximately $420,000. The building is completely heated and cooled by use of four central towers in the main office area and perimeter ventilators on all four walls. Architect-engineer was Harper Richards Associates, Chicago.

One factor in determining the site of the new building, Cory reports, was convenience of officers and personnel; and the northwest side of West Peterson Avenue, in the vicinity where the greater percentages of these persons reside, was chosen.

In recognition of the success of the company's new project, a Citation of Merit from the Producers Council and the American Institute of Architects was awarded to Cory only a short time after the building was completed late this spring.

Tools of the Office

(*From page* 60)

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Northwest Metal Products Co., 1337 E. Mason St., Green Bay, Wis. Machine desks. Posting desks. Tub desks and files.

Tools of the Office

Nu-Craft Products Co., 321-327 *Clarkson Ave., Brooklyn* 26, *N. Y.* Posting trays and stands.

Orna-metal, Inc., 2412 *S. Seventh St., St. Louis* 4. Machine stands.

Peerless Steel Equipment Co., 6600 *Hasbrook Ave., Philadelphia* 11. Machine desks. Posting desks.

Posting Equipment Corp., 1026 *Niagara St., Buffalo* 13. Posting trays and stands. Tub desks and files.

Quigley Furniture Co., 62 *Foster St., Whitesboro, N. Y.* Machine tables and stands.

Remington Rand, Div. of Sperry Rand Corp., 315 *Fourth Ave., New York* 10. Machine desks, tables, and stands. Posting desks, trays, and stands. Tub desks and files.

J. K. Rishel Furniture Co., 1201 *W. Third St., Williamsport* 19, *Pa.* Machine desks, tables, and stands. Posting desks. Tub files.

Riteform Chair Co., Inc., 2300 *Ellis Ave., St. Paul* 5. Machine tables.

W. T. Rogers Co., 518 *Division St., Madison* 4, *Wis.* Machine desks.

Royal Metal Mfg. Co., 175 *N. Michigan Ave., Chicago* 1. Machine desks and stands.

Security Steel Equipment Corp., Avenel, N. J. Machine desks.

The Shaw-Walker Co., Muskegon, Mich. Posting trays, desks, and stands. Machine desks. Card desks.

The C. E. Sheppard Co., 44-01 *21st St., Long Island City* 1, *N. Y.* Posting trays.

Sherman-Manson Corp., Selina Rd., St. Marys, Ohio. Machine tables and stands.

Stationers Guild of America, 1421 *Chestnut St., Philadelphia* 2. Posting trays and stands.

Steelcase, Inc., 1491 *Division Ave. S., Grand Rapids* 2, *Mich.* Machine desks.

Steel-Parts Mfg. Co., 4630 *W. Harrison St., Chicago* 44. Machine tables and stands.

Stempel Mfg. Co., 2830 *Roberts St., Dallas* 3. Machine tables.

Stewart Office Furniture Co., 6523 *N. Hoyne Ave., Chicago* 45. Machine tables.

Stolper Steel Products Corp., Menomonee Falls, Wis. Machine tables and stands.

Readers wishing further information from manufacturers of products listed in the Tools of the Office section may use the Readers' Inquiry Coupon on the last page.

Sun Engineering & Mfg. Co., Inc., Pinellas International Airport, St. Petersburg, Fla. Machine tables.

Systems Sales Co., P. O. Box 343, *Binghamton, N. Y.* Machine desks. Tub desks.

Tiffany Stand Co., Inc., 7350 *Forsyth Blvd., St. Louis* 5. Machine tables and stands.

Toledo Guild Products, Inc., 228 *Fassett St., Toledo* 5, *Ohio.* Machine tables.

The Toledo Metal Furniture Co., 1100-1200 *Hastings St., Toledo* 7, *Ohio.* Machine tables.

Underwood Corp., 1 *Park Ave., New York* 16. Machine stands. Posting stands.

Vanpe, Inc., 4613 *S. State St., Chicago.* Machine desks, tables, and stands.

The Victor Safe & Equipment Co., Inc., 315 *Fourth Ave., New York* 10. Posting desks.

Visirecord, Inc., Copiague, L. I., N. Y. Posting desks. Machine tables. Tub files.

Vue-Fax Corp., 655 *Main St., Westbury, L. I., N. Y.* Posting desks. Tub files.

Wassell Organization, Inc., Sylvan Ave., Westport, Conn. Posting desks.

Watson Mfg. Co., 63 *Taylor St., Jamestown, N. Y.* Tub files.

Welch Metal Products, Inc., 8557 *San Fernando Rd., Sun Valley, Calif.* Machine stands.

Wells Furniture Mfg. Co., Laurel, Miss. Machine tables.

Wilson Jones Co., 209 *S. Jefferson St., Chicago* 6. Posting stands and trays. Machine stands.

The Worden Co., 200 *E.* 17 *St., Holland, Mich.* Machine desks.

Yawman & Erbe Mfg. Co., P. O. Box 880, *Rochester* 3, *N. Y.* Machine desks. Posting desks.

Erratum

In the listing of products of the Borg-Erickson Corp. on page 68 of the June issue of this magazine, that company's postal scales were described as of the spring type. The scales should have been described as having a coined-beam mechanism.

New compact coffee urns

SUPPLY OWN HOT WATER

Tri-Saver Jr.* and Sealweld Jr.

- Saves space, low-cost, free of costly repairs.
- Sealwelded leakproof seams . . . no solder
- Unbreakable permanent sanitary stainless steel liner.
- Quick disassembly for cleaning and maintenance.

*Has Tri-Saver filter . . . eliminates urn bag and filter paper. In 3 and 5 gal. sizes. See your Blickman dealer or write:

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look for this symbol of quality — Blickman-Built

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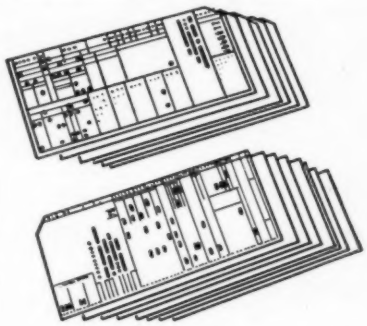

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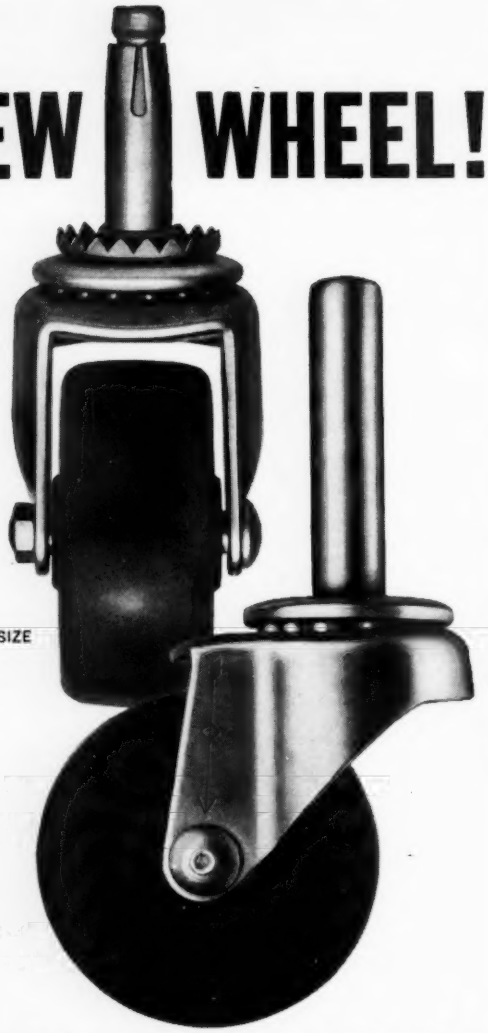

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lasts 50% longer... boosts floor protection...standard on 2" chair casters... at no additional cost!

Bassick and Firestone engineers worked months to develop a rubber wheel compound that would give longer service under all types of abusive conditions. Under continuous tests the new wheel's performance has been outstanding. You can expect 50% longer service from this than from previous 2" rubber wheels.

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BELLEVILLE, ONT.

Bassick
A DIVISION OF
STEWART SW WARNER

Catalogs, Booklets, Brochures

for the office

Offset Equipment

Mead Papers, Inc., 118 W. First St., Dayton 2, Ohio. *How to Get Big Results With Office-Size Offset Equipment,* a 24-page booklet presenting hints and suggestions on how to employ small offset presses to greater advantage. **(1)**

Drafting Unit

Stacor Equipment Co., 768-778 E. New York Ave., Brooklyn 3, N. Y. Bulletin describing a new efficiency drafting unit which provides a complete work station for engineers and draftsmen. **(2)**

Tab Card Files

Record Files, Inc., Wooster, Ohio. New 16-page multi-color catalog covering the firm's line of filing equipment for the tabulating phase of industry. **(3)**

Binders

Elbe File & Binder Co., Inc., P. O. Box 951, Fall River, Mass. Loose-leaf and sales presentation catalog, 116 pages in length, listing more than 2,500 stock items, with special price schedules for a variety of made-to-order binders. **(4)**

Accounting Shortcuts

Charles Bruning Co., Inc., 4700 Montrose Ave., Chicago 41. A 16-page illustrated booklet, *Shortcuts to Accounting,* explaining methods by which to speed and simplify paperwork in a wide range of accounting operations. **(5)**

Paperwork Control

Naremco Services, Inc., 555 Fifth Ave., New York. New 12-page brochure outlining the problems of "corporate red-tape" and describing the management consultant firm's own solution to these problems. **(6)**

Office Standards

Art Metal Construction Co., 369 Broadway, New York 13. *Office Standards Book,* a 96-page book indicating methods to save work and time in office procedures, together with a brochure on the firm's line of job-planned desks. **(7)**

Air Diffusers

Anemostat Corp. of America, 10 E. 39th St., New York. New 80-page Selection Manual No. 60, covering air diffusers for air conditioning, heating and ventilating systems, and including air distribution definitions, sound level characteristics, static pressure factors and typical installations. **(8)**

White Print Machine

Ozalid Div. of General Aniline and Film Corp., 4 Corliss Lane, Johnson City, N. Y. Bulletin describing the "Streamliner 200" white print machine, together with specifications and features. **(9)**

Moving, Shipping, Storage Supplies

Elkay Products Co., 323 W. 16th St., New York 11. New edition of catalog, 88 pages in length, covering Elkay's moving, shipping and storage supplies, comprising more than 1100 items, with illustrations and photographs. **(10)**

Automation Guide

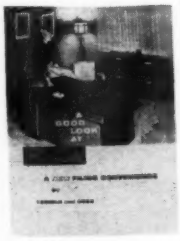
Allen Hollander Co., Inc., 385 Gerard Ave., New York 51. Guide, *Automation-Labelation,* describing function of automation systems, with listing of various types of pin feed labels and test-kit of marginally-punched feed labels for experimentation included. **(11)**

Polyester Film

Film Dept., Industrial Sales Section, E. I. Du Pont de Nemours & Co., (Inc.), Wilmington 98, Del. Brochure describing uses for, and properties of, Mylar polyester film. **(12)**

Steel Cabinets

Penco Metal Products Div., Alan Wood Steel Co., 200 Brower Ave., Oaks, Pa. Bulletin (SE-6) describing and illustrating the Penco line of steel cabinets, wardrobe cabinets, desk-height efficiency cabinets and combination cabinets, as well as steel lockers and steel shelving. **(13)**



Filing Cabinets

Yawman and Erbe Mfg. Co., 1099 Jay St., Rochester 3, N. Y. Two-color brochure, *A Good Look at Pro-File,* covering features of the Pro-File filing cabinet line and discussing Pro-File filing methods. **(14)**

Adding Machine

Burroughs Corp., Detroit 32, Mich. Folder outlining features of the Burroughs Ten Key Adding Machine. **(15)**

For further information, use Reader Inquiry Card on page 92.

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THE REAL "FIRST" IN ERASERS

For Outstanding Convenience & Time-Savings!

WIDESPREAD USE proves the popularity of this first really new eraser in years! 4½" *cylindrical rubber sticks encased in clean, attractive, transparent plastic holders.* Handy, fountain pen size. Balanced "feel" for easy use, ideal fit, between thumb and fingers. Not a mechanical gadget.

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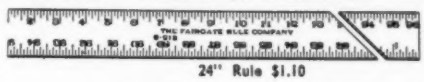

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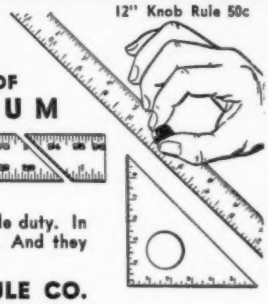

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Simply circle the respective numbers in coupon below

Just circle the numbers on which you want further information; fill in your name and address below, tear out and mail to Office Management. Our office will forward your inquiries promptly to the companies concerned.

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4	42	73	86 CCS
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(Circle respective item numbers)

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TOOLS OF THE OFFICE

Information on products listed in the Tools of the Office section may be requested by writing in names of manuturers.

Manufacturer	Page No.

Name ..... **Title** .....

Company .....

Address .....

City ..... **Zone** ..... **State** .....

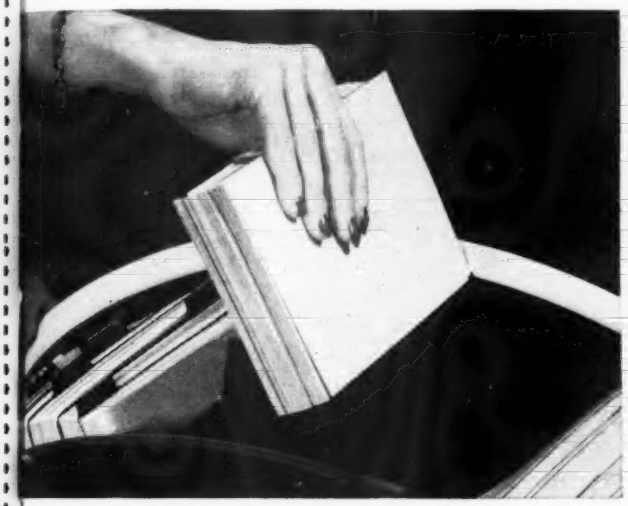
Number of Office Employees (all departments) .....

August 1957 Issue, Office Management

This inquiry form good until September 15, 1957

4 Reasons to take a new look at rotary card filing

1. **USES PRESENT CARDS.** With amazing Mosler Revo-File, no costly transposition is needed. You save an average of $200 in change-over costs plus big savings in time, space, money over old-fashioned filing.



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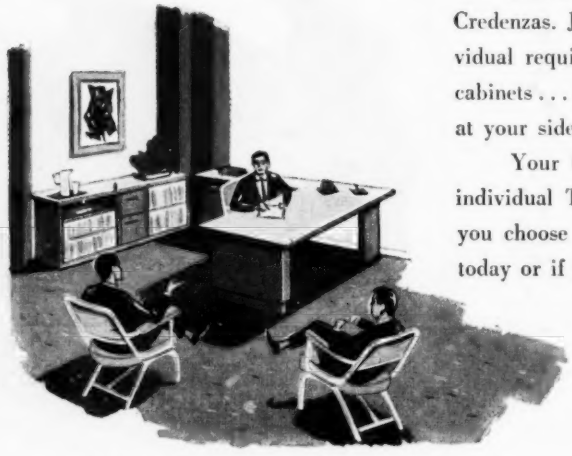

The newest way is G/W Techniplan combined with Streamliner Credenzas. Just imagine an arrangement custom-tailored to fit your individual requirements complete with bookcases, box drawers, file drawers, cabinets . . . all within an easy arm's reach. Important business tools are at your side, leaving your desk top clear and free.

Your Globe-Wernicke dealer* will be glad to show you the many individual Techniplan and Credenza components available. He will help you choose from a wide selection of combinations and colors. Call him today or if you wish, write us direct Dept. A-G8.

*dealers listed in the Yellow Pages under "Office Furniture."

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